



# City of Rowlett

## Official Copy

Ordinance: ORD-001-14

4000 Main Street  
Rowlett, TX 75088  
www.rowlett.com

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**AN ORDINANCE OF THE CITY OF ROWLETT, TEXAS, REPEALING IN ITS ENTIRETY PART III OF VOLUME II OF THE CODE OF ORDINANCES, CITY OF ROWLETT, TEXAS, TO REPEAL ALL GENERAL CONSTRUCTION SPECIFICATIONS; AMENDING ARTICLE I ("IN GENERAL") OF CHAPTER 78 ("BUILDINGS AND BUILDING REGULATIONS") OF VOLUME II OF THE CODE OF ORDINANCES, CITY OF ROWLETT, TEXAS, TO REPLACE SECTION 78-1 AND ADD A NEW SECTION 78-2 TO ADOPT COMPREHENSIVE PLANS, DETAILS, SPECIFICATIONS AND REQUIREMENTS FOR THE CONSTRUCTION OF PUBLIC WORKS INCLUDING STREETS, ALLEYS, UTILITIES, AND OTHER INFRASTRUCTURE; PROVIDING A REPEALING CLAUSE; PROVIDING A SAVINGS CLAUSE; PROVIDING A SEVERABILITY CLAUSE; PROVIDING A PENALTY OF FINE NOT TO EXCEED THE SUM OF TWO THOUSAND DOLLARS (\$2,000) FOR EACH VIOLATION; AND, PROVIDING AN EFFECTIVE DATE.**

**WHEREAS**, the City Council of the City of Rowlett finds and determines that the City's existing construction details and specifications for public and private infrastructure, including streets, alleys, pavement, water, sewer and drainage facilities, are outdated, confusing and in some respects contradictory; and

**WHEREAS**, the Council finds and determines that a need exists to update and revise the City's existing construction standards; and

**WHEREAS**, the Council finds that the adoption of standard construction specifications promulgated by the North Central Texas Council of Governments will insure the installation and construction of adequate and more durable public and private infrastructure; and

**WHEREAS**, in addition to the standard construction specifications promulgated by the North Central Texas Council of Governments, additional construction details and standards that are appropriate for the City's topographic, geologic, and soil characteristics should be adopted; and

**WHEREAS**, the Council finds that the repeal of existing construction details and specifications, and the adoption of new construction details and specifications are in the best interest of the public health, safety and welfare.

**NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF ROWLETT, TEXAS:**

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**Section 1.** That the Code of Ordinances, City of Rowlett, Texas, be and the same is hereby amended by repealing Part III of Volume II of the Code of Ordinances, City of Rowlett, Texas, in its entirety. Henceforth, Part III of Volume II of the Code of Ordinances shall be and is hereby reserved for future expansion.

**Section 2.** That the City Council of the City of Rowlett, Texas, hereby adopts the North Central Texas Council of Governments (NCTCOG) Public Works Construction Standards, as amended, which standards are referenced in Section 78-1 of the Code of Ordinances as adopted by this ordinance. The Council further adopts the Rowlett Standard Construction Details, referenced in Section 78-1 of the Code of Ordinances adopted by this ordinance, a true and correct copy of which is attached hereto and by this reference incorporated herein. True and correct copies of the NCTCOG Public Works Construction Standards and the Rowlett Standard Construction Details shall be kept and maintained in the office of the City Secretary and in the office of the Director of Public Works, and shall be made available in those offices for review and reference.

**Section 3.** That Article I ("In General") of Chapter 78 ("Buildings and Building Regulations") of Volume II of the Code of Ordinances, City of Rowlett, Texas, be and is hereby amended by repealing and replacing Section 78-1, and adding Section 78-2, such that Sections 78-1 and 78-2 of Article I of Chapter 78 shall henceforth read in their entirety as follows:

## **"CHAPTER 78"**

### **BUILDINGS AND BUILDING REGULATIONS**

#### **ARTICLE I. IN GENERAL**

##### **Sec. 78-1. Standard details adopted.**

There is hereby adopted by reference the North Central Texas Council of Governments (NCTCOG) Public Works Construction Standards, as amended, and the City of Rowlett Standard Construction Details. Copies of the NCTCOG Public Works Construction Standards and the City of Rowlett Standard Construction Details shall be kept and maintained in the offices of the City Secretary and the City's Director of Public Works.

##### **Sec. 78-2. Conflicts, waivers, interpretation and appeal.**

- (a) In the event of a conflict or inconsistency between the NCTCOG Public Works Construction Standards and the City of Rowlett Standard Construction Details, the City of Rowlett Standard Construction Details shall prevail and be applicable.
  - (b) In the event that a standard or requirement is ambiguous or incomplete, the Director of Public Works or his/her designee is delegated the authority to interpret the provisions of the construction standards adopted by this article.
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- (c) The Director of Public Works or his/her designee may allow exceptions or waivers, or may impose additional reasonable conditions, if appropriate for varying circumstances or site conditions, and if the Director's determination will not diminish the effectiveness of the construction.
- (d) If the Director's interpretation or determination results in substantially greater cost in the design or construction of the project, the interpretation or determination may be appealed to the City Manager and the City Manager's determination shall be final and binding. In the absence of a substantial cost increase or an appeal as provided for herein, the Director's determination shall be final and binding."

**Section 4.** That the City Council may amend the City of Rowlett Standard Construction Details by resolution, without the necessity of formal ordinance. Future amendments to the North Central Texas Council of Governments Public Works Construction Standards shall be automatically incorporated and included in the standards imposed herein as said amendments are approved and promulgated by the North Central Texas Council of Governments.

**Section 5.** That all ordinances of the City of Rowlett, Texas, in conflict with the provisions of this ordinance be and the same are hereby repealed and all other ordinances of the City not in conflict with the provisions of this ordinance shall remain in full force and effect.

**Section 6.** That an offense committed before the effective date of this ordinance is governed by the prior law and the provisions of the Code of Ordinances, as amended, in effect when the offense was committed and the former law is continued in effect for this purpose.

**Section 7.** That should any sentence, paragraph, subdivision, clause, phrase or section of this ordinance be adjudged or held to be unconstitutional, illegal or invalid, the same shall not affect the validity of this ordinance as a whole, or any part or provision hereof other than the part so decided to be invalid, illegal or unconstitutional, and shall not affect the validity of the Code of Ordinances as a whole.

**Section 8.** That any person, firm or corporation violating any of the provisions or terms of this ordinance shall be subject to the same penalty as provided for in the Code of Ordinances of the City of Rowlett, as heretofore amended, and upon conviction shall be punished by a fine not to exceed the sum of two thousand dollars (\$2,000.00) for each offense.

**Section 9.** That this ordinance shall take effect immediately from and after its passage and the publication of the caption, as the law and Charter in such case provide.

At a meeting of the City Council on January 7, 2014 this Ordinance be adopted. The motion carried by the following vote:

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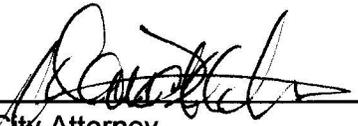
**Ayes: 7** Mayor Gottel, Mayor Pro Tem Kilgore, Deputy Mayor Pro Tem Gallops, Councilmember Phillips, Councilmember Dana-Bashian, Councilmember Pankratz and Councilmember Bobbitt

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Approved by   
Mayor

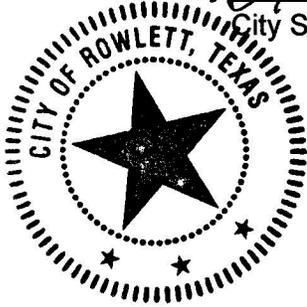
Date January 7, 2014

Approved to form by   
City Attorney

Date January 7, 2014

Certified by   
City Secretary

Date January 7, 2014

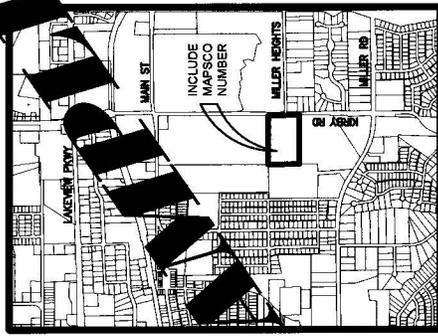
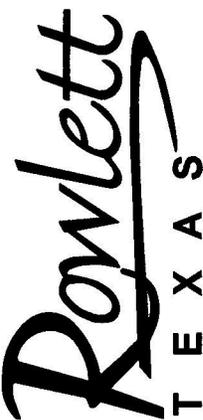


(DEVELOPMENT NAME)

ADDRESS

CITY OF ROWLETT, TEXAS

CONSTRUCTION PLANS



PROJECT VICINITY MAP (Plan date)

Exhibit A

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET / INDEX
2	PLAT
3	PROJECT GENERAL NOTES
4	PAVING PLANS NAMED ROAD (STA. 0+00 TO 0+00)
5	PAVING PLANS NAMED ROAD (STA. 0+00 TO 14+25)
6	PAVING PLANS ...
7	PAVING PLANS ...
8	DRAINAGE AREA MAP (BORROWING)
9	DRAINAGE AREA MAP (BORROWING)
10	DRAINAGE AREA MAP (BORROWING)
11	STORM DRAIN ...
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OWNER: NAME ADDRESS PHONE

SUBMITTED BY: FIRM NAME NAME ADDRESS PHONE TX REG. #

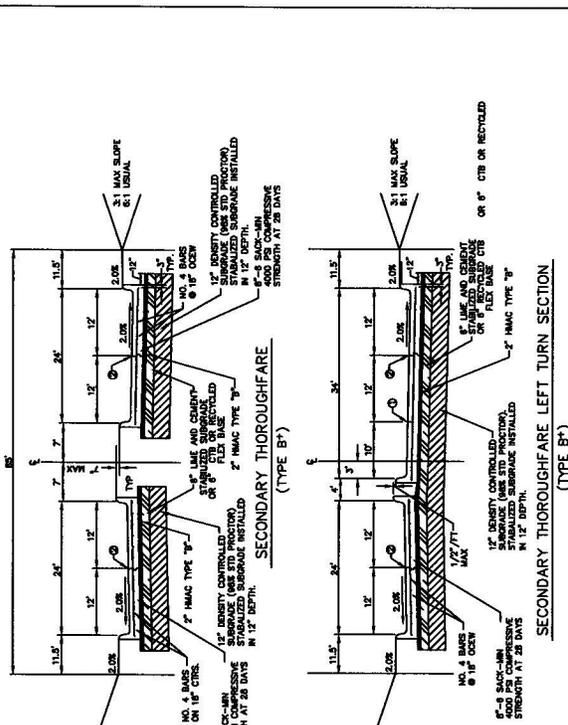
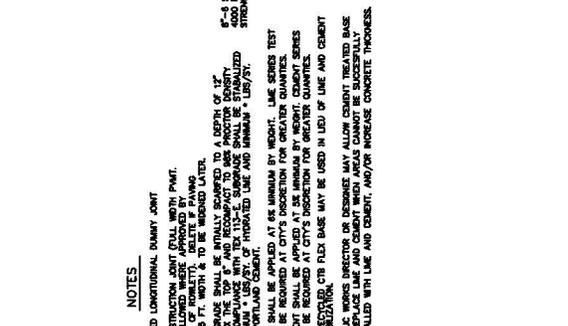
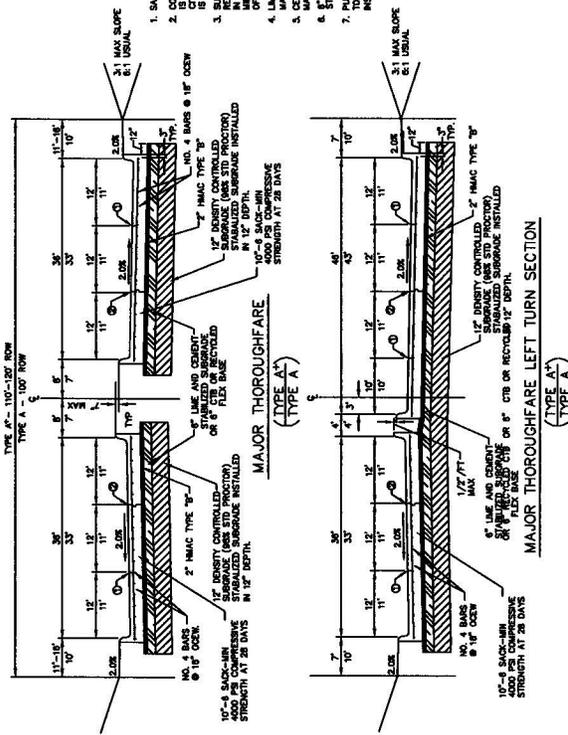
ENGINEERING FIRM LOGO (ENG. SEAL)

(ENG. SIGNATURE) (DATE) ENGINEER NAME, PE DATE

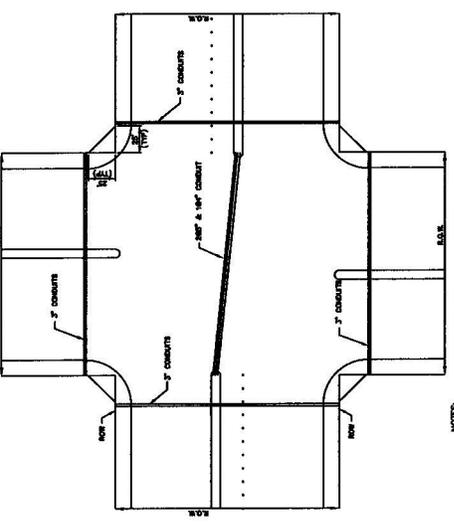




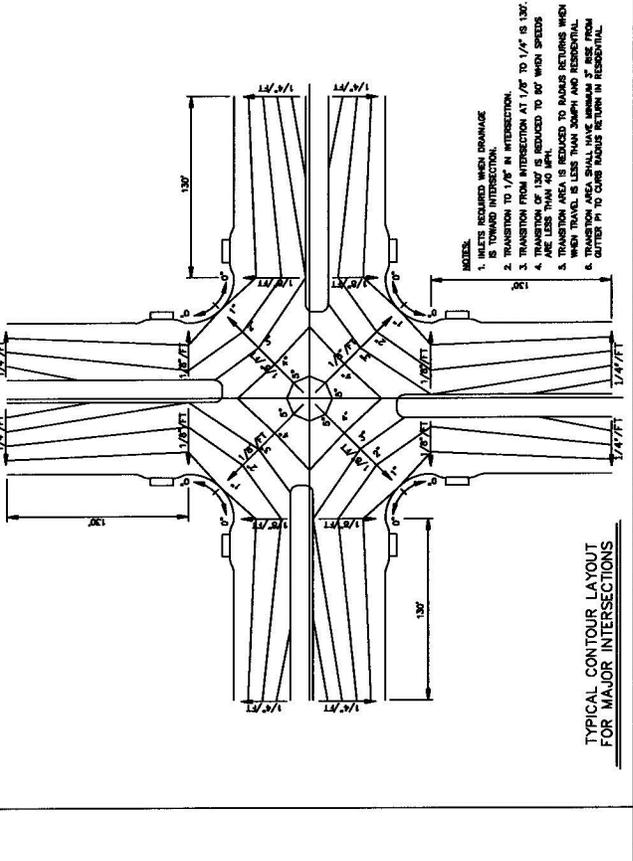




- NOTES**
1. SAVED LONGITUDINAL DUMMY JOINT
  2. CONSTRUCTION JOINT SHALL BE PAINTED WITH 1/2" OF POLYURETHANE SEALING COMPOUND TO BE REPAIRED LATER.
  3. SUBGRADE SHALL BE INITIALLY COMPACTED TO A DEPTH OF 12" IN COMPLIANCE WITH TEX 133-L. SUBGRADE SHALL BE STABILIZED BY POWER-LANE SCALP, HORIZONTAL LIME AND UNBANKED LBS/5Y.
  4. LIME SHALL BE APPLIED AT 6% UNBANK BY WEIGHT. LIME SERIES TEST MAY BE REQUIRED AT CITY'S DISCRETION FOR GREATER QUANTITIES.
  5. CURB SHALL BE APPLIED AT 3% MINIMUM BY WEIGHT. CURB SERIES SHALL BE 1000 PSI COMPRESSIVE STRENGTH.
  6. 8" REINFORCED CURB BASE MAY BE USED IN LIEU OF LIME AND CEMENT STABILIZATION.
  7. PUBLIC WORKS DIRECTOR OR DESIGNEE MAY ALLOW CEMENT TREATED BASE INSTEAD OF LIME AND CEMENT STABILIZATION.
  8. STABILIZATION SHALL BE INSTALLED WITH LIME AND CEMENT AND/OR INCREASE CONCRETE THICKNESS.



- NOTES**
1. 2" AND 1 1/2" PVC TO BE INSTALLED CONTINUOUS ADDRESS INTERSECTION, EXTENDING TO MIN. 2' BEHIND CURB AND COMPLETELY OUT OF ANY PAVING, OR TO RIGHT-OF-WAY AT A DEPTH OF 2' BELOW THE BOTTOM OF PAVING.
  2. CONDUITS SHALL BE INSTALLED ON THE ENDS OF THE CONDUIT. END OF CONDUIT SHALL ALSO BE SEALED.
  3. THE EXACT LOCATIONS WHERE THE CONDUIT CROSSES UNDER THE PAVING SHALL BE DETERMINED WITH AN APPROVED METHOD OF PAVING LOCATION TESTS.
  4. A NYLON CORD SHALL BE PLACED IN ALL CONDUITS. THIS CORD SHALL BE EXTENDED THROUGH THE PAVING TO THE CURB FACE. THE CORD FOR EACH CONDUIT SHALL BE IDENTIFIED BY A TAG OR MARKING. THE CORD FOR EACH CONDUIT SHALL BE IDENTIFIED BY A TAG OR MARKING. THE CORD FOR EACH CONDUIT SHALL BE IDENTIFIED BY A TAG OR MARKING.



- NOTES**
1. INLETS REQUIRED WHEN DRAINAGE IS TOWARD INTERSECTION.
  2. TRANSITION TO 1/8" IN INTERSECTION.
  3. TRANSITION FROM INTERSECTION AT 1/8" TO 1/4" IS 130'.
  4. TRANSITION OF 1/8" IS REDUCED TO 90' WIDE SPEEDS.
  5. TRANSITION AREA IS REDUCED TO PARALLEL RESIDENTIAL.
  6. TRANSITION AREA SHALL HAVE UNBANKED RISE FROM CENTERLINE TO CURB RADIUS RETURN IN RESIDENTIAL.

**GENERAL NOTES**

1. ALL CURBS SHALL BE PLACED INTERNAL WITH PAVEMENT.
2. CURBS SHALL MEET THE SAME STRENGTH AS SPECIFIED FOR THE CONCRETE PAVEMENT.
3. DETAIL AND ARRANGEMENT OF JOINTS, ALL TYPES, SHALL BE AS SHOWN ON SHEET SD-3 OF THE STANDARD CONSTRUCTION DETAILS.
4. BAR LAP LENGTH SHALL BE 30 DIAMETERS (12" MINIMUM).
5. DENSITY CONTROLLED SUBGRADE SHALL BE COMPACTED TO A DENSITY NOT LESS THAN 98 PERCENT STANDARD PROCTOR DENSITY AND MOISTURE AT 2%. LABORATORY TESTS SHALL BE SUBMITTED TO THE PUBLIC WORKS DIRECTOR OR DESIGNEE FOR APPROVAL PRIOR TO INSTALLING LIME AND CEMENT STABILIZATION.
6. BAR CHAIRS OR AN APPROVED SUPPORTING DEVICE SHALL BE FURNISHED.
7. CROSS SLOPE SHALL BE 2.0% UNLESS APPROVED BY PUBLIC WORKS DIRECTOR OR DESIGNEE.
8. ALL MEDIAN & PARKWAYS SHALL BE SEDED OR SODDED WITH BERBERA GRASS OR RYE GRASS, UNLESS OTHERWISE SPECIFIED. THE SEEDING SHALL BE APPROVED BY THE PUBLIC WORKS DIRECTOR OR DESIGNEE. THE SEEDING SHALL BE THE SAME GRASS AS EXISTING.
9. FLASH MAY BE INCORPORATED INTO THE MIX DESIGN (UP TO 20% BY WEIGHT) ONLY WHEN APPROVED BY THE PUBLIC WORKS DIRECTOR OR DESIGNEE. NO FLASH ALLOWED WHEN AMBIENT TEMPERATURE IS BELOW 50 DEGREES.
10. TRAFFIC SHALL NOT BE PLACED ON PAVING UNTIL 14 DAYS CURING IS COMPLETE, OR 7 DAYS AT FULL STRENGTH, AND LAB RESULTS MET. LOSS REQUIRED STRENGTH. PAVEMENT MAY BE OPENED TO TRAFFIC WHEN STRENGTH IS ESTABLISHED AND APPROVED BY CITY ENGINEER. PRIVATE PROPERTY SHALL BE THE SAME GRASS AS EXISTING.
11. MESSAGE BOARDS AND ARROW BOARDS REQUIRED ON ALL MAJOR AND SECONDARY THOROUGHFARES AND MESSAGE BOARDS SHALL BE PLACED AT LEAST 7 DAYS PRIOR TO CLOSURES AND DETOUR.
12. ADOPTED TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

REV.	BY	DATE	COMMENTS

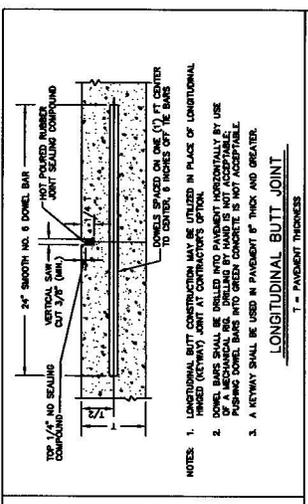
**City of Rowlett, Texas**  
**Department of Public Works**

**STANDARD CONSTRUCTION DETAILS**  
**PAVING**

**STRAIGHT CROWN STREETS**

DESIGNER	PROJECT NO.	SHEET
DRAWN	DATE	SD-1

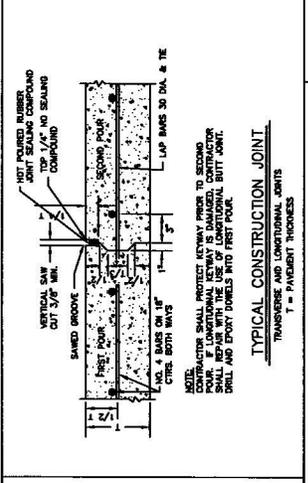




- NOTES:
1. LONGITUDINAL BUTT CONSTRUCTION MAY BE UTILIZED IN PLACE OF LONGITUDINAL HIBED (KEYWAY) JOINT AT CONTRACTOR'S OPTION.
  2. DOME BARS SHALL BE WELDED INTO PAVEMENT INCORPORALLY BY USE OF WELDED BARS INTO GREEN CONCRETE IS NOT ACCEPTABLE.
  3. A KEYWAY SHALL BE USED IN PAVEMENT IF THICK AND GREATER.

**LONGITUDINAL BUTT JOINT**

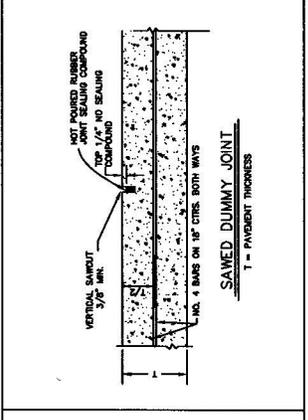
T = PAVEMENT THICKNESS



- NOTE:
- CONTRACTOR SHALL PROTECT KEYWAY PRIOR TO SEALING. CONTRACTOR SHALL REPAIR WITH THE USE OF LONGITUDINAL BUTT JOINT. DRILL AND EJECT DOWELS INTO FRESH POLE.

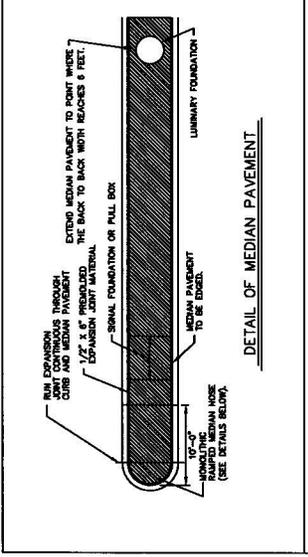
**TYPICAL CONSTRUCTION JOINT**

T = PAVEMENT THICKNESS

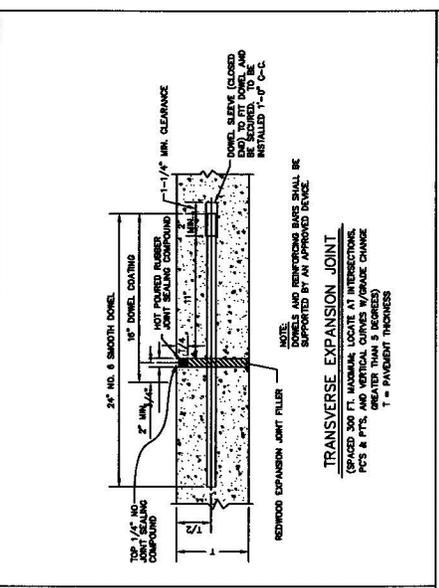


**SAWED DUMMY JOINT**

T = PAVEMENT THICKNESS



**DETAIL OF MEDIAN PAVEMENT**

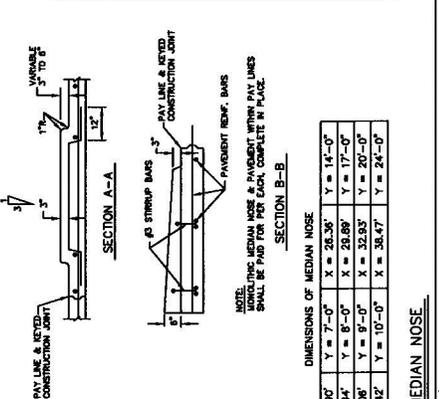


**TRANSVERSE EXPANSION JOINT**

NOTES:

DOWELS AND REINFORCING BARS SHALL BE SUPPORTED BY AN APPROVED DEVICE.

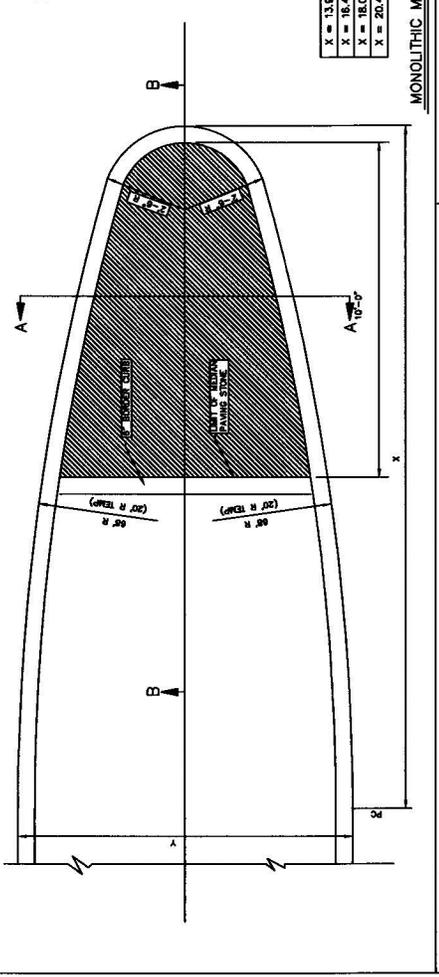
REINWOOD EXPANSION JOINT FILLER



**MONOLITHIC MEDIAN NOSE**

NOTE: DIMENSIONS OF MEDIAN NOSE

X	Y	X	Y
X = 13.80	Y = 7'-0"	X = 26.35	Y = 14'-0"
X = 18.44	Y = 8'-0"	X = 28.89	Y = 17'-0"
X = 18.08	Y = 9'-0"	X = 32.53	Y = 20'-0"
X = 20.42	Y = 10'-0"	X = 38.47	Y = 24'-0"



**SPACING DIAGRAM FOR TRANSVERSE JOINTS**

- NOTES:
1. ALL SAWS SHALL BE SAWS WITHIN 4-12 HOURS AFTER TIME OF POUR OR AS SOON AS CONCRETE SAW CAN BE PLACED ON SOUND CONCRETE.
  2. SAWS DUMMY JOINTS AT 7', 8', 9', 10', 14', 17', 20', AND 24' INTERVALS.
  3. SEE TYPICAL SECTIONS FOR LOCATION OF LONGITUDINAL JOINTS.
  4. ALL SAWS SHALL BE SAWS WITHIN 7 DAYS OF SAWING OR IMMEDIATELY FOLLOWING REQUIRED CONCRETE CURING.

REV. \_\_\_\_\_ BY \_\_\_\_\_ DATE \_\_\_\_\_

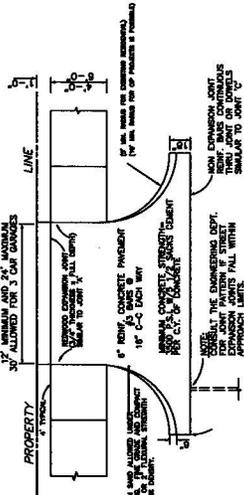
COMMENTS \_\_\_\_\_

**City of Rowlett, Texas**  
 DEPARTMENT OF PUBLIC WORKS  
 STANDARD CONSTRUCTION DETAILS  
 PAVING  
 STRAIGHT CROWN STREETS

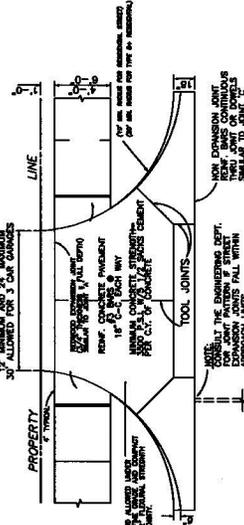
DESIGN: \_\_\_\_\_ CHECKED: \_\_\_\_\_

PROJECT NO: \_\_\_\_\_ SHEET: SD-3

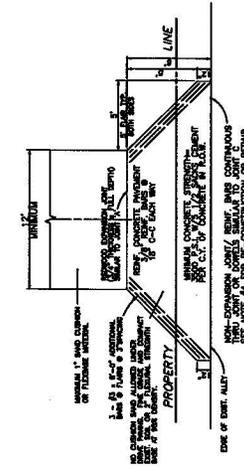
**REPAIR EXISTING RESIDENTIAL DRIVEWAY**



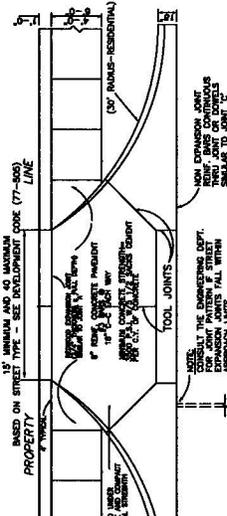
**TYPICAL RESIDENTIAL DRIVEWAY**



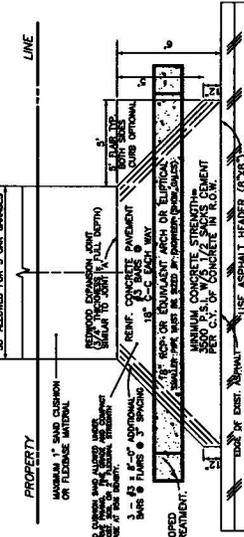
**TYPICAL RESIDENTIAL DRIVEWAY APPROACH TO ALLEY**



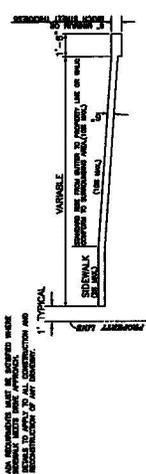
**TYPICAL COMMERCIAL DRIVE APPROACH**



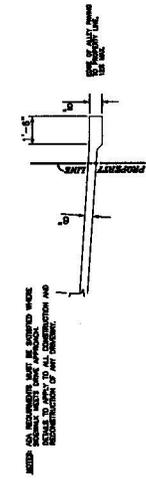
**RESIDENTIAL DRIVE ABUTTING ASPHALT STREET**



**TYPICAL DRIVE SECTION**



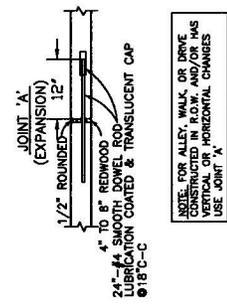
**SECTION FOR ALLEY DRIVE APPROACH**



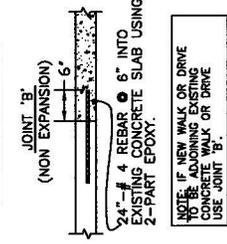
**GENERAL DRIVE NOTES:**

1. CONCRETE FINISH SHALL NOT BE LESS THAN 3500 P.S.I. IN APPROACH AND OUTSIDE APPROACH.
2. REINFORCING BARS WITH MINIMUM #4 REINFORCING BARS @ 18" C-C TRANSVERSE & NOT MORE THAN 18" C-C LONGITUDINAL.
3. 6" MIN-12" MAX MONOLITHIC CURB OR METCOB 802.2 (SD-2180) SHALL BE INSTALLED WHEN A MAXIMUM VERTICAL RISE IN R.O.W. IS 3.1' SLOPE OR GREATER, OR WHERE NECESSARY OR AS DIRECTED BY THE PUBLIC WORKS DIRECTOR OR DESIGNER.
4. ALLEY RE-CONSTRUCTION OR REPAIR REQUIRES INSTALLATION OF REDWOOD EXPANSION JOINT 'A' AT EDGE OF ALLEY.
5. DOWNELLING SHALL BE INTO FULLY CURED CONCRETE ONLY.
6. TRAFFIC/ EQUIPMENT ACCESS FOR ANY NEW PAVING SHALL BE 14 DAYS OR ON FULLY CURED CONCRETE AS APPROVED BY OWNER UNLESS TYPE III CEMENT IS USED, THEN PAVEMENT MAY OPENED AFTER 4 DAYS.
7. FORMS SHALL REMAIN IN PLACE FOR CURING PER LATEST VERSION MCTCOB.
8. AFTER CURB & GUTTER ABUTTING STREET HAS BEEN SAMPLED AND REMOVED, NO MORE THAN 72 HOURS IS ALLOWED BEFORE DRIVE APPROACH CONCRETE IS PLACED.
9. A PERMIT IS REQUIRED FOR DRIVE PAVING OVER 100 SF OF RIGHT-OF-WAY PERMIT IS REQUIRED, AND RIGHT-OF-WAY INSPECTION FOR ANY AREAS IN THE RIGHT-OF-WAY OR EASEMENT.
10. FINAL INSPECTION AND ACCEPTANCE OF THE DRIVE APPROACH BY OUR PUBLIC WORKS WILL BE REQUIRED. ANY DEFECTS, INCLUDING CRACKING WILL BE REMOVED AND REPLACED.
11. IF WATER METERS, VALVES, MANHOLES, AND CLEAN-OUTS ARE IN PAVING AREAS THEY SHALL MEET OUR ENGINEERING STANDARDS AND FIRE CODE FOR LOAD RATINGS.

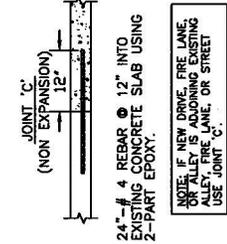
**DOWELLING DETAILS**



NOTE: FOR ALLEY, WALK OR DRIVE APPROACH, DOWNELLING SHALL BE VERTICAL OR HORIZONTAL CHANGES USE JOINT 'A'



NOTE: IF NEW WALK OR DRIVE APPROACH, DOWNELLING SHALL BE VERTICAL OR HORIZONTAL CHANGES USE JOINT 'B'



NOTE: IF NEW DRIVE, FIRE LANE, ALLEY, WALK OR DRIVE APPROACH, DOWNELLING SHALL BE VERTICAL OR HORIZONTAL CHANGES USE JOINT 'C'

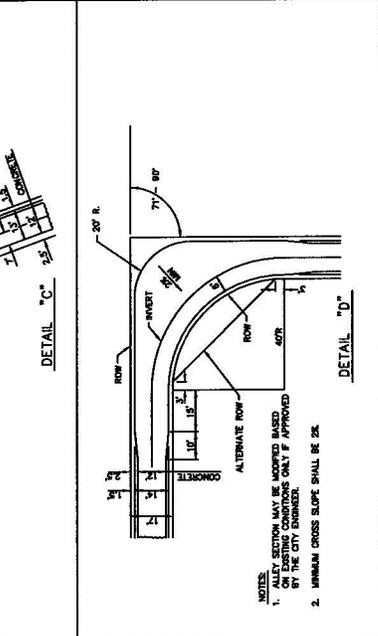
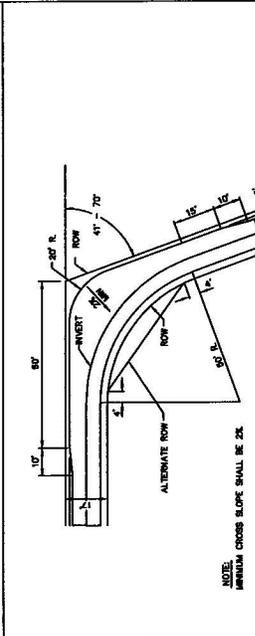
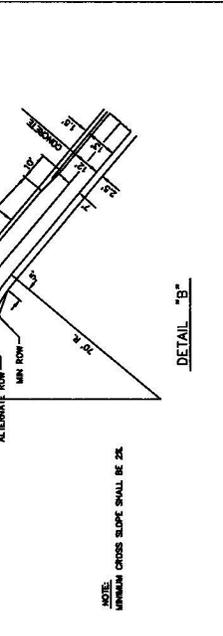
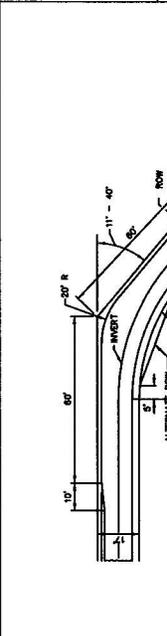
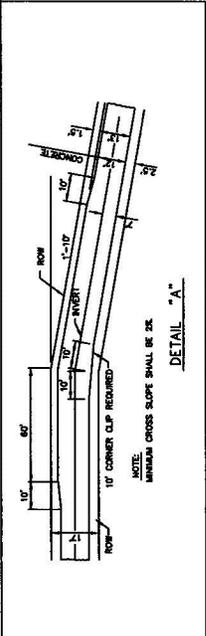
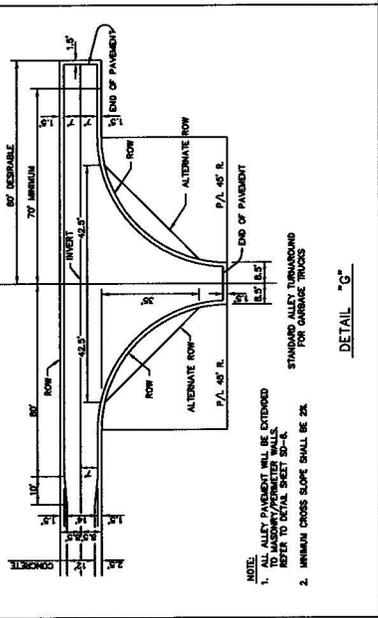
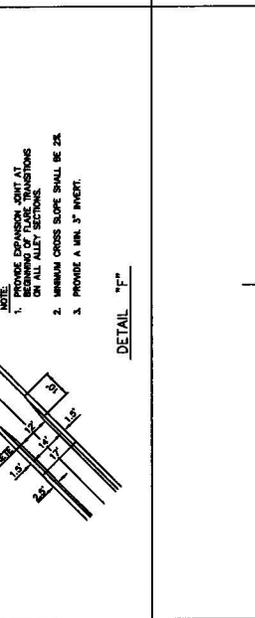
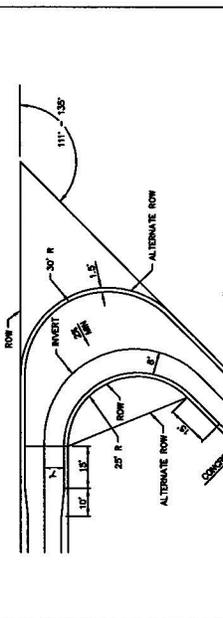
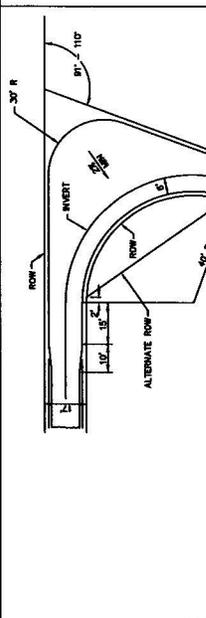
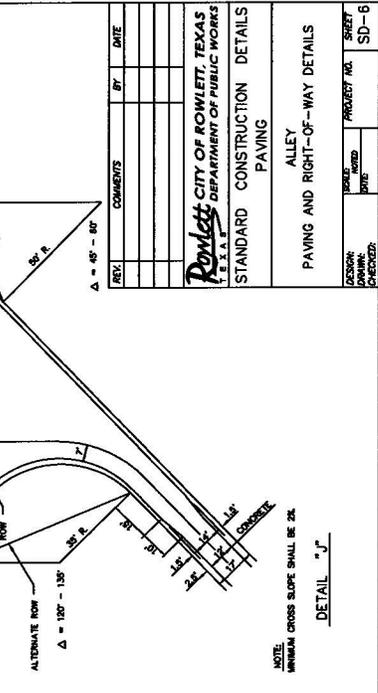
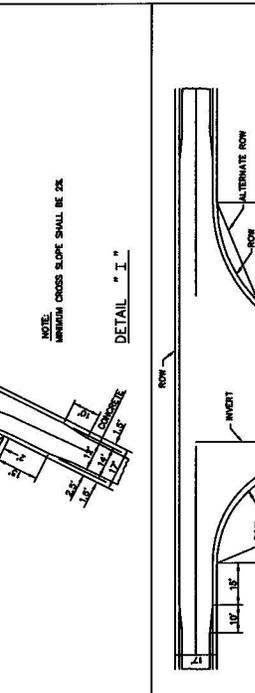
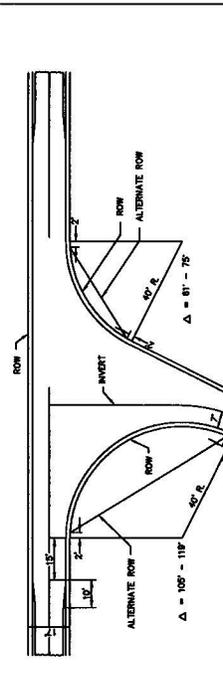
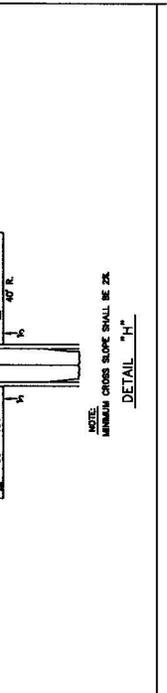
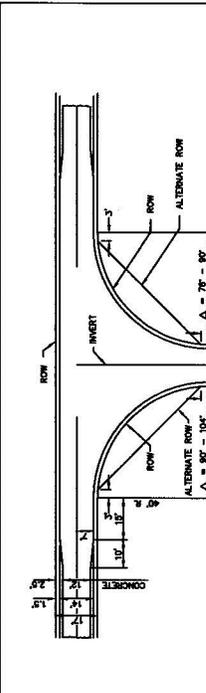
REV.	COMMENTS	BY	DATE

**POWELLS CITY OF ROWLETT, TEXAS**  
DEPARTMENT OF PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS  
PAVING  
DRIVEWAY DETAILS

DESIGN CHECKED	DATE	PROJECT NO.	SHEET
			SD-4

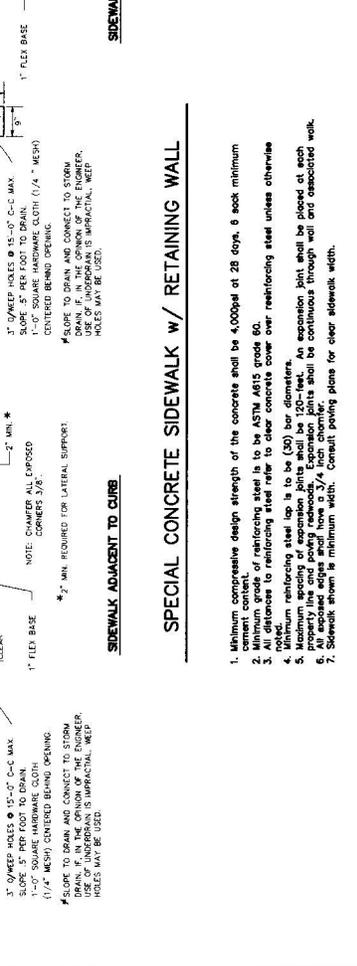
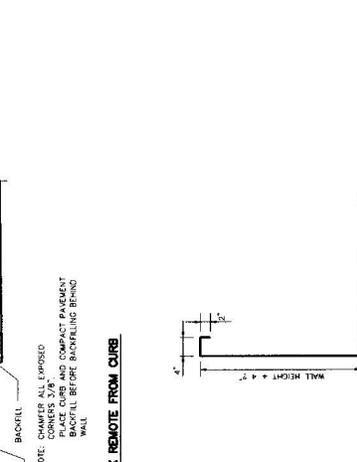
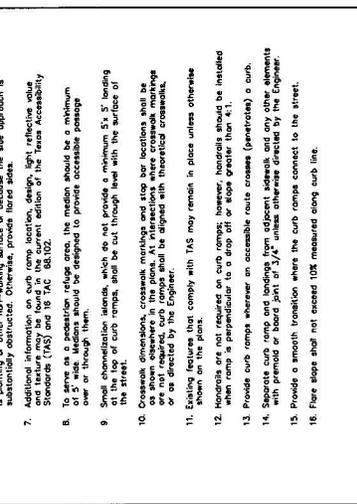
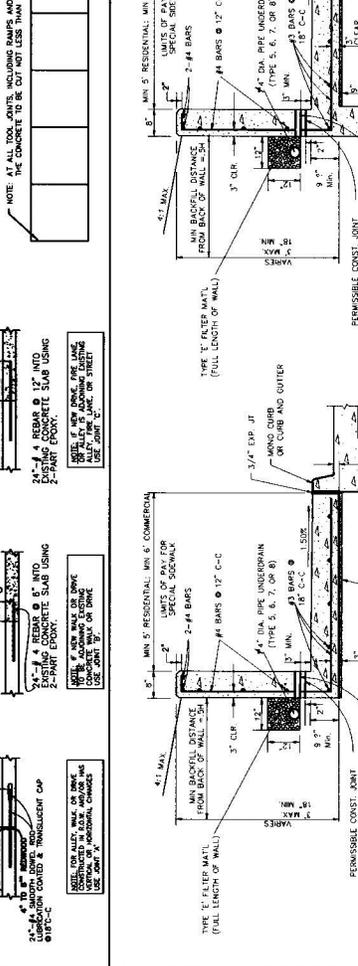
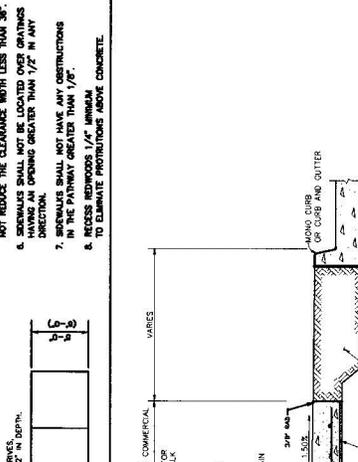
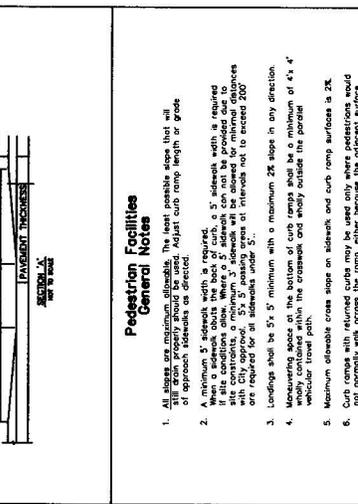
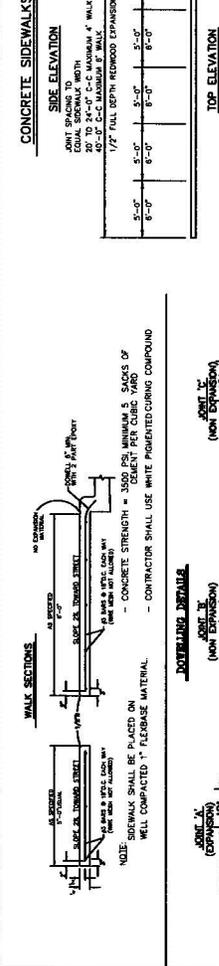
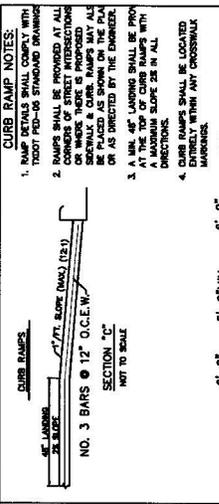




REV.	COMMENTS	BY	DATE

**Rowlett**  
 CITY OF ROWLETT, TEXAS  
 DEPARTMENT OF PUBLIC WORKS  
 T. E. A. A. P.  
 STANDARD CONSTRUCTION DETAILS  
 PAVING  
 ALLEY  
 PAVING AND RIGHT-OF-WAY DETAILS

DESIGNER	CHECKED	DATE	PROJECT NO.	SHEET
				SD-6



REV.	COMMENTS	BY	DATE

**DESIGN: JAWHAB**

**CHECKED: JAWHAB**

**PROJECT NO.:**

**SHEET NO.:** SD-7

**ROWLETT CITY OF ROWLETT, TEXAS**

**DEPARTMENT OF PUBLIC WORKS**

**STANDARD CONSTRUCTION DETAILS**

**CONCRETE SIDEWALKS**

**CURB RAMP & DOWELLING DETAILS**

REV.	COMMENTS	BY	DATE

**DESIGN: JAWHAB**

**CHECKED: JAWHAB**

**PROJECT NO.:**

**SHEET NO.:** SD-7

**ROWLETT CITY OF ROWLETT, TEXAS**

**DEPARTMENT OF PUBLIC WORKS**

**STANDARD CONSTRUCTION DETAILS**

**CONCRETE SIDEWALKS**

**CURB RAMP & DOWELLING DETAILS**

REV.	COMMENTS	BY	DATE

**DESIGN: JAWHAB**

**CHECKED: JAWHAB**

**PROJECT NO.:**

**SHEET NO.:** SD-7

**ROWLETT CITY OF ROWLETT, TEXAS**

**DEPARTMENT OF PUBLIC WORKS**

**STANDARD CONSTRUCTION DETAILS**

**CONCRETE SIDEWALKS**

**CURB RAMP & DOWELLING DETAILS**

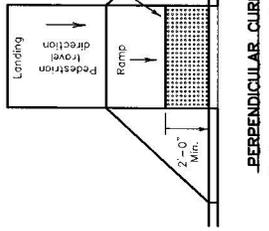


### General Notes

1. Install a curb ramp or blended transition at each pedestrian street crossing.
2. All slopes shown are maximum allowable. Lesser slopes that will still drain properly should be used. Adjust curb ramp length or grade of approach sidewalks as directed.
3. The minimum sidewalk width is 5'. Where the sidewalk is adjacent to the back of curb, a 6' sidewalk width is required. Where a 5' sidewalk is required due to site constraints, sidewalk width may be reduced to 4' for short distances. 5' x 5' passing areas at intervals not to exceed 200' are required.
4. Landings shall be 5' x 5' minimum with a maximum 2% slope in any direction.
5. Manoeuvring space at the bottom of curb ramps shall be a minimum of 4' x 4', wholly contained within the crosswalk and wholly outside the parallel vehicular travel path.
6. Maximum allowable cross slope on sidewalk and curb ramp surfaces is 2%.
7. Provide flared sides where the pedestrian circulation path crosses the curb ramp. Flared sides shall be sloped at 10% maximum, measured parallel to the curb. Returned curbs may be used only where pedestrians would not normally walk across the ramp, either because the adjacent surface is planted, substantially obstructed, or otherwise protected.
8. Additional information on curb ramp location, design, light reflective value and texture may be found in the current edition of the Texas Accessibility Standards (TAS) and 16 TAC 68.102.
9. To serve as a pedestrian refuge area, the median should be a minimum of 6' wide, measured over or through them. Medians should be designed to provide accessible passage over or through them.
10. Small channelization islands, which do not provide a minimum 5' x 5' landing at the top of curb ramps, shall be cut through level with the surface of the street.
11. Crosswalk dimensions, crosswalk markings and stop bar locations shall be as shown elsewhere in the plans. At intersections where crosswalk markings are not required, curb ramps shall align with theoretical crosswalks unless otherwise directed.
12. Handrails are not required on curb ramps. Provide curb ramps wherever an accessible route crosses (permanently) a curb.
13. Curb ramps and landings shall be constructed and paid for in accordance with Item 531 "Sidewalks".
14. Place concrete at a minimum depth of 5" for ramps, flares and landings, unless otherwise directed.
15. Provide a smooth transition where the curb ramps connect to the street.
16. Curb ramps shown on sheet 1 within the limits of payment are considered part of the curb ramp for payment, whether it is concrete curb, gutter, or combined curb and gutter.
17. Existing features that comply with TAS may remain in place unless otherwise shown on the plans.

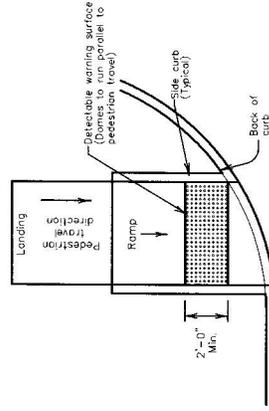
### Detectable Warning Material

18. Curb ramps must contain a detectable warning surface that consists of raised truncated domes complying with Section 705 of the TAS. The surface must contrast visually with adjoining surfaces, including side flares. Furnish and install on approved cast-in-place dark brown or dark red detectable warning surface material adjacent to uncolored concrete, unless specified elsewhere in the plans.
19. Detectable Warning Materials must meet TxDOT Departmental Materials Specification DMS 4350 and be listed on the Material Producer List. Install products in accordance with manufacturer's specifications.
20. Detectable warning surfaces must be slip resistant and not allow water to accumulate.
21. Detectable warning surfaces shall be a minimum of 24" in depth in the direction of pedestrian travel, and extend the full width of the curb ramp or landing where the pedestrian access route enters the street.
22. Detectable warning surfaces shall be located so that the edge nearest the curb line does not protrude into the travel way. The perpendicular distance to the grade break between the curb top and the street. Detectable warning surfaces may be curved along the corner radius.
23. Shaded areas on Sheet 1 of 4 indicate the approximate location for the detectable warning surface for each curb ramp type.



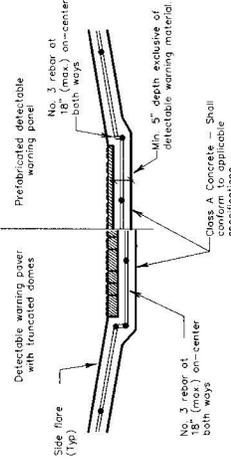
### PERPENDICULAR CURB RAMP

Typical placement of detectable warning surface on sloping ramp run.



### DIRECTIONAL CURB RAMP

Typical placement of detectable warning surface on sloping ramp run.



### SECTION: CURB RAMP AT DETECTABLE WARNING

### DETECTABLE WARNINGS

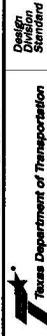
#### Detectable Warning Powers

24. Furnish detectable warning power units meeting all requirements of ASTM C-936, C-33. Lay in a line by two unit basket weave pattern as directed.
25. Lay full-size units first followed by closure units consisting of at least 25 percent of a full unit. Cut detectable warning power units using a power saw.

#### Sidewalks

26. Provide clear ground space of operable parts, including pedestrian push buttons. Operable parts shall be placed within one or more reach ranges specified in TAS 308.
27. Place traffic signal or illumination poles, ground boxes, controller boxes, signs, drainage facilities and other items so as not to obstruct the pedestrian access route or clear ground space.
28. Street grades and cross slopes shall be as shown elsewhere in the plans.
29. Changes in level greater than 1/4 inch are not permitted.
30. The least possible grade should be used to maximize accessibility. The running slope of sidewalks and crosswalks within the public right of way may follow the grade of the existing roadway. Where a running slope greater than 2% may be provided, the plans may be amended to incorporate detectable warning materials also provided to protect pedestrians from potentially hazardous conditions. If provided, handrails shall comply with TAS 305.
31. Horizontal extensions shall not protrude into the usable landing area or into intersecting pedestrian routes.
32. Driveways and turnouts shall be constructed and paid for in accordance with item 531, "Intersections, Driveways and Turnouts". Sidewalks shall be constructed and paid for in accordance with Item, "Sidewalks".
33. Sidewalk details are shown elsewhere in the plans.

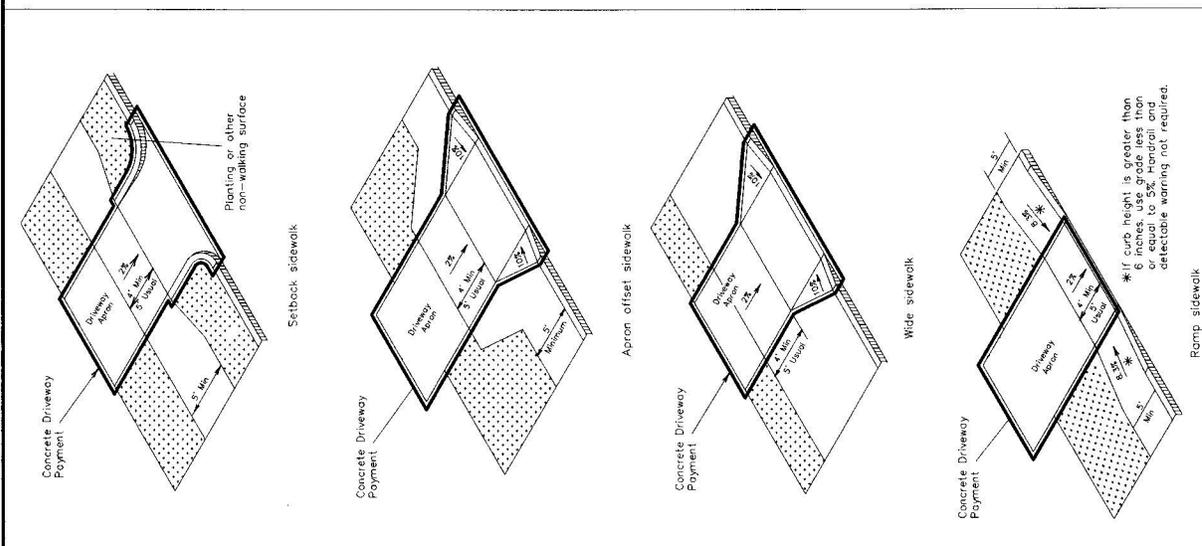
SHEET 2 OF 4



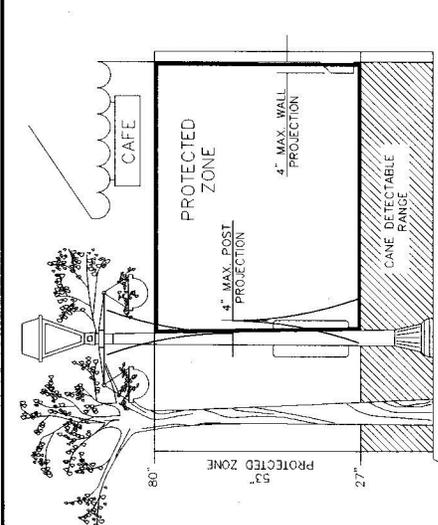
DESIGN STANDARD  
PEDESTRIAN FACILITIES  
CURB RAMPS

PED-12A

DATE	BY	CHK	APP	IN CHARGE	PROJECT	SHEET NO.	TOTAL SHEETS
04/01/2012	04/01/2012						
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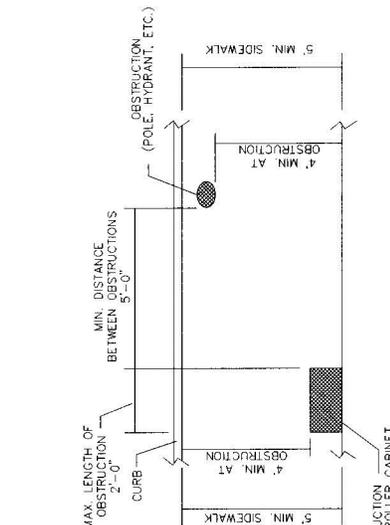


**SIDEWALK TREATMENT AT DRIVEWAYS**



**PROTECTED ZONE**

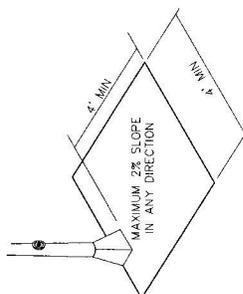
In pedestrian circulation area, maximum 4" projection for objects mounted between 27" and 80" above the surface.



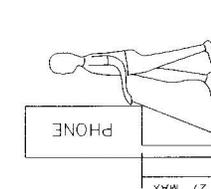
**PLAN VIEW**

**PLACEMENT OF STREET FIXTURES**

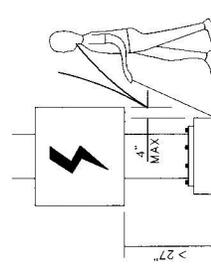
(ITEMS NOT INTENDED FOR PUBLIC USE MINIMUM 4" x 4" CLEAR GROUND SPACE REQUIRED AT PUBLIC USE FIXTURES.)



**CLEAR GROUND SPACE ADJACENT TO PEDESTRIAN PUSH BUTTON**



Protruding objects of a height <math>27''</math> are detectable by cane and do not require additional treatment.



When an obstruction of a height greater than 27" from the surface would create a protrusion of more than 4" into the pedestrian circulation area, construct a curb for a maximum 4" overhang, bottom to provide a maximum 4" overhang.

**DETECTION BARRIER FOR VERTICAL CLEARANCE <math>< 80''</math>**

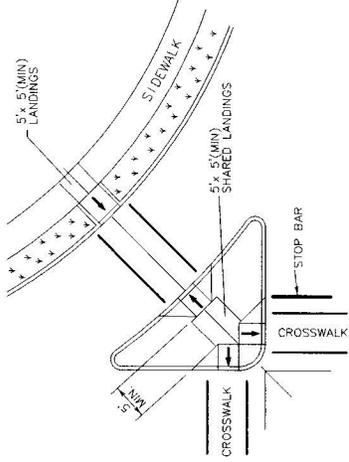
**Texas Department of Transportation**  
**Design Standard**

**PEDESTRIAN FACILITIES**  
**CURB RAMPS**

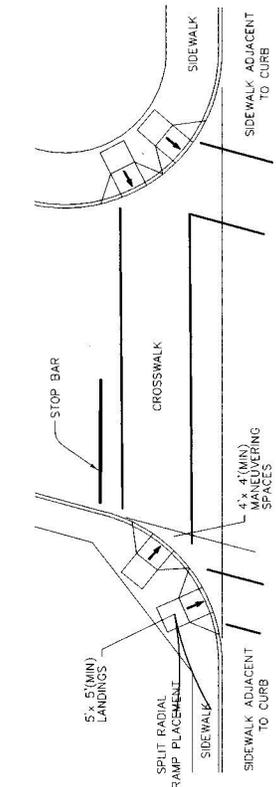
**PED-12A**

FILE: 2427.20.00  
 DATE: 11/01  
 REVISED: 03/02  
 PROJECT: 2427.20.00  
 COUNTY: 2427  
 COUNTY: 2427  
 SHEET NO. 2427.20.00

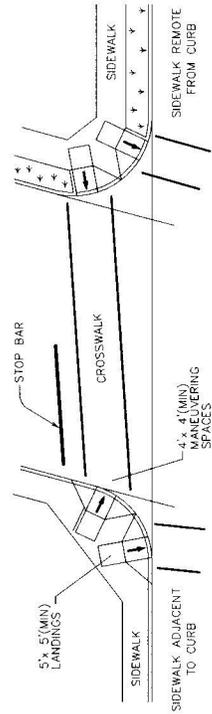
DISCLAIMER: This standard is governed by the "Texas Engineering Practice Act." No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.



**SKewed INTERSECTION WITH "LARGE" RADIUS**

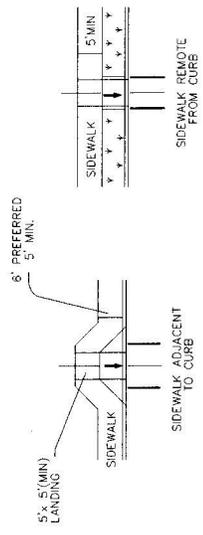


**SKewed INTERSECTION WITH "SMALL" RADIUS**



**NORMAL INTERSECTION WITH "SMALL" RADIUS**

**AT INTERSECTION W/FREE RIGHT TURN & ISLAND**



**MID-BLOCK PLACEMENT PERPENDICULAR RAMPS**

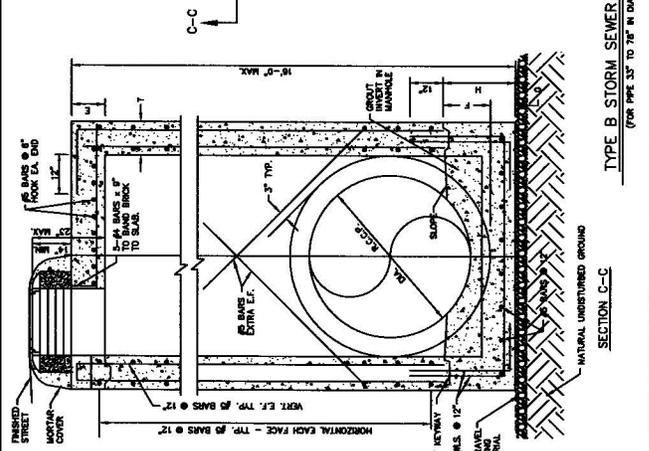
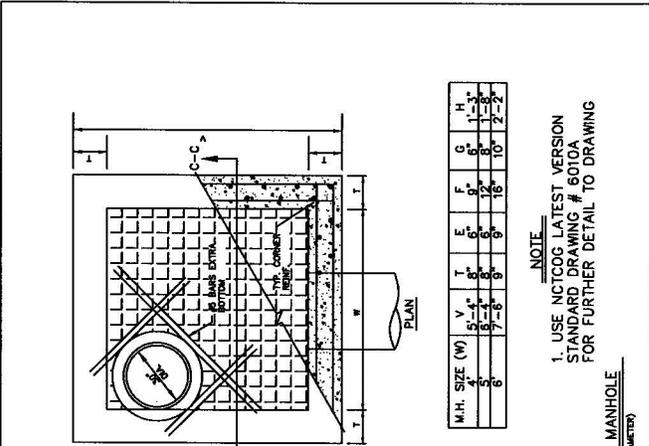
DISCLAIMER: The use of this standard is governed by the "Texas Engineering Practice Act". No warranty of any kind is made by TxDOT for any purpose whatsoever. TxDOT assumes no responsibility for the conversion of this standard to other formats or for incorrect results or damages resulting from its use.

SHEET 4 OF 4


**Design Division Standard**  
**PEDESTRIAN FACILITIES**  
**CURB RAMPS**  
**PED-12A**

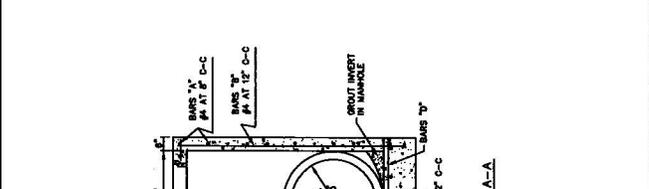
FILE: PED12A.dgn	DATE: 1/20/01	BY: JMT	CHK: JMT	APP: JMT
PROJECT: 1007	DATE: March 2002	CHG: JMT	NO: 1	NO: 1
REVISED BY: JMT	DATE: June 13, 2012	BY: JMT	NO: 1	NO: 1
SHEET NO.		COUNT		PROJECT NO.

TYPICAL CROSSING LAYOUTS



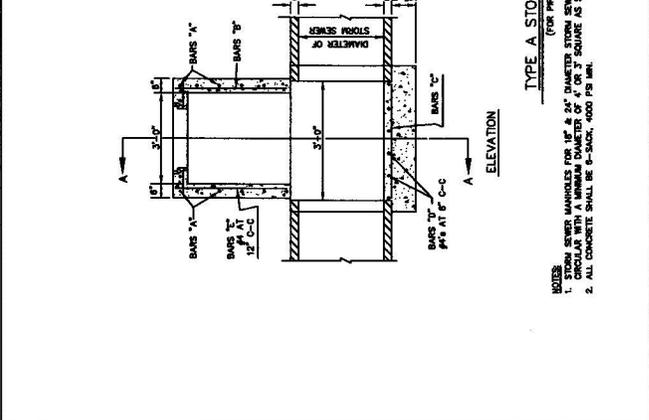
M.H. SIZE (W)	V	T	E	F	G	H
4'	5'-4"	8'	6'	8'	10'	1'-0"
5'	5'-4"	8'	6'	8'	10'	1'-0"
6'	5'-4"	8'	6'	8'	10'	1'-0"
7'-8"	5'-4"	8'	6'	8'	10'	2'-2"

**NOTE**  
 1. USE NCTOGG LATEST VERSION STANDARD DRAWING # 6010A FOR FURTHER DETAIL TO DRAWING

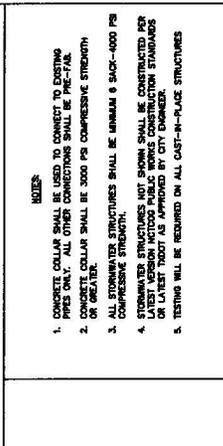


**TYPE A STORM SEWER MANHOLE**  
 (FOR PIPE 18" TO 30" IN DIAMETER)

**NOTES**  
 1. STORM SEWER MANHOLES FOR 18" & 24" DIAMETER STORM SEWERS MAY BE CIRCULAR WITH A MINIMUM DIAMETER OF 4' OR 3' SQUARE AS SHOWN.  
 2. ALL CONCRETE SHALL BE 6-SACK, 4000 PSI MIN.



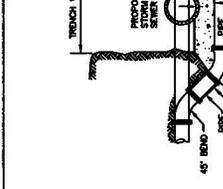
**TYPE B STORM SEWER MANHOLE**  
 (FOR PIPE 33" TO 78" IN DIAMETER)



**NOTES**  
 1. CONCRETE COLLAR SHALL BE USED TO CONNECT TO EXISTING PIPES ONLY. ALL OTHER CONNECTIONS SHALL BE PRE-PAID.  
 2. PRE-PAID COLLAR SHALL BE 3000 PSI COMPRESSIVE STRENGTH OR GREATER.  
 3. ALL STORMWATER STRUCTURES SHALL BE MINIMUM 6 SACK-4000 PSI COMPRESSIVE STRENGTH.  
 4. STORMWATER STRUCTURES NOT SHOWN SHALL BE CONSTRUCTED FOR LATEST VERSION NCTOGG PUBLIC WORKS CONSTRUCTION STANDARDS.  
 5. TESTING WILL BE REQUIRED ON ALL CAST-IN-PLACE STRUCTURES

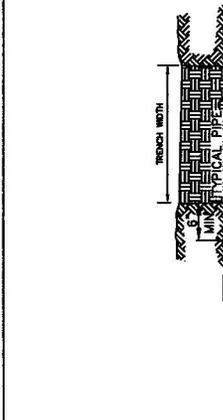


**DETAIL OF CONCRETE COLLAR FOR PIPE CONNECTIONS**



**DETAIL FOR WATER MAIN LOWERING**

**NOTES**  
 1. MEAN-LOG RETAINER SLABS SHALL BE INSTALLED ON ALL FITTINGS.  
 2. CONCRETE TRIPLE BLOCKS SHALL BE CONSTRUCTED ON ALL BENCHES.  
 3. ALL FITTINGS SHALL BE INSTALLED AT VERTICAL, 45 DEGREE AND VERTICAL PIPE CONNECTIONS.  
 4. MINIMUM 5 FEET C-800 OR USE ANCHOR IMPILE WITH NO ALL-THREAD.  
 5. CLEARANCE SHALL COMPLY WITH DEED.



**DETAIL OF UTILITY SUPPORT**

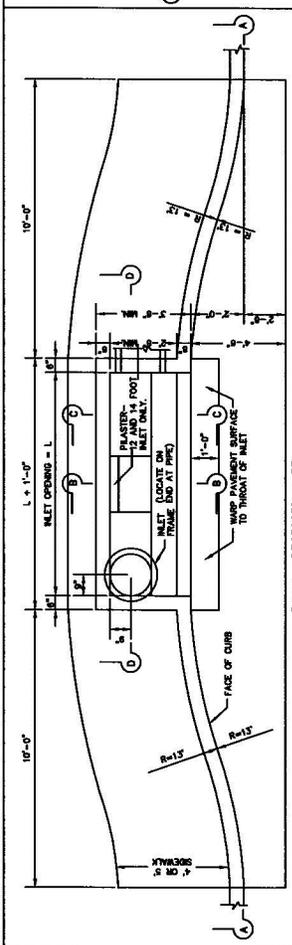
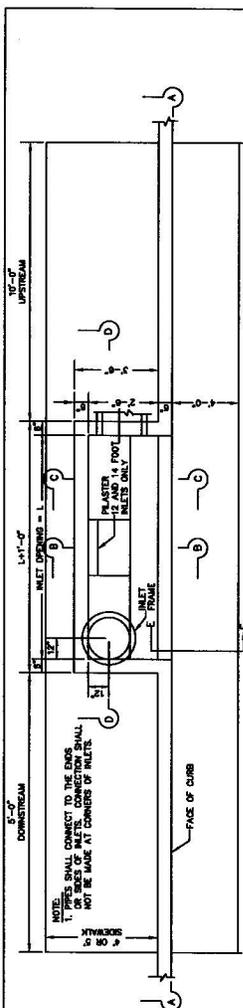
REV.	COMMENTS	BY	DATE

**City of Rowlett, Texas**  
 DEPARTMENT OF PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS  
 STORM DRAINAGE

TYPICAL STORM MANHOLES  
 UTILITY SUPPORT  
 WATER MAIN LOWERING  
 CONCRETE COLLAR

DESIGN: [Name]  
 DRAWING: [Name]  
 CHECKED: [Name]  
 PROJECT NO. [Number]  
 SHEET NO. [Number] SD-B



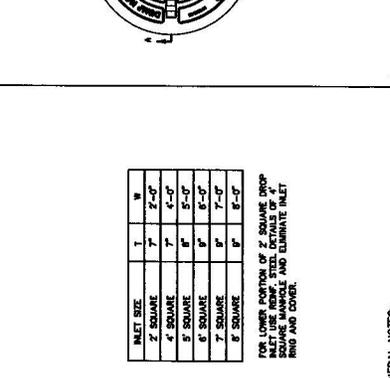
**REINFORCING STEEL SCHEDULE**

DIMENSIONS SHOWN ARE FOR MAXIMUM SIZE BARS

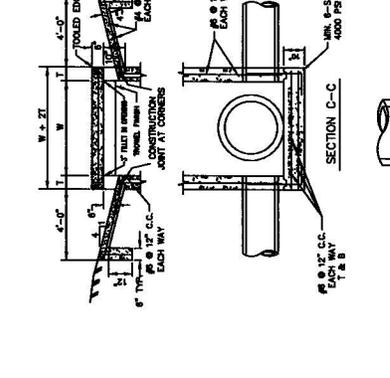
NO.	TYPE	BAR	REINFORCING	REMARKS
1	A	3	3/4"	3/4"
2	B	3	3/4"	3/4"
3	C	3	3/4"	3/4"
4	D	3	3/4"	3/4"
5	E	3	3/4"	3/4"
6	F	3	3/4"	3/4"
7	G	3	3/4"	3/4"
8	H	3	3/4"	3/4"
9	I	3	3/4"	3/4"
10	J	3	3/4"	3/4"
11	K	3	3/4"	3/4"
12	L	3	3/4"	3/4"
13	M	3	3/4"	3/4"
14	N	3	3/4"	3/4"
15	O	3	3/4"	3/4"
16	P	3	3/4"	3/4"
17	Q	3	3/4"	3/4"
18	R	3	3/4"	3/4"
19	S	3	3/4"	3/4"
20	T	3	3/4"	3/4"
21	U	3	3/4"	3/4"
22	V	3	3/4"	3/4"
23	W	3	3/4"	3/4"
24	X	3	3/4"	3/4"
25	Y	3	3/4"	3/4"
26	Z	3	3/4"	3/4"
27	AA	3	3/4"	3/4"
28	AB	3	3/4"	3/4"
29	AC	3	3/4"	3/4"
30	AD	3	3/4"	3/4"
31	AE	3	3/4"	3/4"
32	AF	3	3/4"	3/4"
33	AG	3	3/4"	3/4"
34	AH	3	3/4"	3/4"
35	AI	3	3/4"	3/4"
36	AJ	3	3/4"	3/4"
37	AK	3	3/4"	3/4"
38	AL	3	3/4"	3/4"
39	AM	3	3/4"	3/4"
40	AN	3	3/4"	3/4"
41	AO	3	3/4"	3/4"
42	AP	3	3/4"	3/4"
43	AQ	3	3/4"	3/4"
44	AR	3	3/4"	3/4"
45	AS	3	3/4"	3/4"
46	AT	3	3/4"	3/4"
47	AU	3	3/4"	3/4"
48	AV	3	3/4"	3/4"
49	AW	3	3/4"	3/4"
50	AX	3	3/4"	3/4"
51	AY	3	3/4"	3/4"
52	AZ	3	3/4"	3/4"
53	BA	3	3/4"	3/4"
54	BB	3	3/4"	3/4"
55	BC	3	3/4"	3/4"
56	BD	3	3/4"	3/4"
57	BE	3	3/4"	3/4"
58	BF	3	3/4"	3/4"
59	BG	3	3/4"	3/4"
60	BH	3	3/4"	3/4"
61	BI	3	3/4"	3/4"
62	BJ	3	3/4"	3/4"
63	BK	3	3/4"	3/4"
64	BL	3	3/4"	3/4"
65	BM	3	3/4"	3/4"
66	BN	3	3/4"	3/4"
67	BO	3	3/4"	3/4"
68	BP	3	3/4"	3/4"
69	BQ	3	3/4"	3/4"
70	BR	3	3/4"	3/4"
71	BS	3	3/4"	3/4"
72	BT	3	3/4"	3/4"
73	BU	3	3/4"	3/4"
74	BV	3	3/4"	3/4"
75	BW	3	3/4"	3/4"
76	BX	3	3/4"	3/4"
77	BY	3	3/4"	3/4"
78	BZ	3	3/4"	3/4"
79	CA	3	3/4"	3/4"
80	CB	3	3/4"	3/4"
81	CC	3	3/4"	3/4"
82	CD	3	3/4"	3/4"
83	CE	3	3/4"	3/4"
84	CF	3	3/4"	3/4"
85	CG	3	3/4"	3/4"
86	CH	3	3/4"	3/4"
87	CI	3	3/4"	3/4"
88	CJ	3	3/4"	3/4"
89	CK	3	3/4"	3/4"
90	CL	3	3/4"	3/4"
91	CM	3	3/4"	3/4"
92	CN	3	3/4"	3/4"
93	CO	3	3/4"	3/4"
94	CP	3	3/4"	3/4"
95	CQ	3	3/4"	3/4"
96	CR	3	3/4"	3/4"
97	CS	3	3/4"	3/4"
98	CT	3	3/4"	3/4"
99	CU	3	3/4"	3/4"
100	CV	3	3/4"	3/4"
101	CW	3	3/4"	3/4"
102	CX	3	3/4"	3/4"
103	CY	3	3/4"	3/4"
104	CZ	3	3/4"	3/4"
105	DA	3	3/4"	3/4"
106	DB	3	3/4"	3/4"
107	DC	3	3/4"	3/4"
108	DD	3	3/4"	3/4"
109	DE	3	3/4"	3/4"
110	DF	3	3/4"	3/4"
111	DG	3	3/4"	3/4"
112	DH	3	3/4"	3/4"
113	DI	3	3/4"	3/4"
114	DJ	3	3/4"	3/4"
115	DK	3	3/4"	3/4"
116	DL	3	3/4"	3/4"
117	DM	3	3/4"	3/4"
118	DN	3	3/4"	3/4"
119	DO	3	3/4"	3/4"
120	DP	3	3/4"	3/4"
121	DQ	3	3/4"	3/4"
122	DR	3	3/4"	3/4"
123	DS	3	3/4"	3/4"
124	DT	3	3/4"	3/4"
125	DU	3	3/4"	3/4"
126	DV	3	3/4"	3/4"
127	DW	3	3/4"	3/4"
128	DX	3	3/4"	3/4"
129	DY	3	3/4"	3/4"
130	DZ	3	3/4"	3/4"
131	EA	3	3/4"	3/4"
132	EB	3	3/4"	3/4"
133	EC	3	3/4"	3/4"
134	ED	3	3/4"	3/4"
135	EE	3	3/4"	3/4"
136	EF	3	3/4"	3/4"
137	EG	3	3/4"	3/4"
138	EH	3	3/4"	3/4"
139	EI	3	3/4"	3/4"
140	EJ	3	3/4"	3/4"
141	EK	3	3/4"	3/4"
142	EL	3	3/4"	3/4"
143	EM	3	3/4"	3/4"
144	EN	3	3/4"	3/4"
145	EO	3	3/4"	3/4"
146	EP	3	3/4"	3/4"
147	EQ	3	3/4"	3/4"
148	ER	3	3/4"	3/4"
149	ES	3	3/4"	3/4"
150	ET	3	3/4"	3/4"
151	EU	3	3/4"	3/4"
152	EV	3	3/4"	3/4"
153	EW	3	3/4"	3/4"
154	EX	3	3/4"	3/4"
155	EY	3	3/4"	3/4"
156	EZ	3	3/4"	3/4"
157	FA	3	3/4"	3/4"
158	FB	3	3/4"	3/4"
159	FC	3	3/4"	3/4"
160	FD	3	3/4"	3/4"
161	FE	3	3/4"	3/4"
162	FF	3	3/4"	3/4"
163	FG	3	3/4"	3/4"
164	FH	3	3/4"	3/4"
165	FI	3	3/4"	3/4"
166	FJ	3	3/4"	3/4"
167	FK	3	3/4"	3/4"
168	FL	3	3/4"	3/4"
169	FM	3	3/4"	3/4"
170	FN	3	3/4"	3/4"
171	FO	3	3/4"	3/4"
172	FP	3	3/4"	3/4"
173	FO	3	3/4"	3/4"
174	FP	3	3/4"	3/4"
175	FQ	3	3/4"	3/4"
176	FR	3	3/4"	3/4"
177	FS	3	3/4"	3/4"
178	FT	3	3/4"	3/4"
179	FU	3	3/4"	3/4"
180	FV	3	3/4"	3/4"
181	FW	3	3/4"	3/4"
182	FX	3	3/4"	3/4"
183	FY	3	3/4"	3/4"
184	FZ	3	3/4"	3/4"
185	GA	3	3/4"	3/4"
186	GB	3	3/4"	3/4"
187	GC	3	3/4"	3/4"
188	GD	3	3/4"	3/4"
189	GE	3	3/4"	3/4"
190	GF	3	3/4"	3/4"
191	GG	3	3/4"	3/4"
192	GH	3	3/4"	3/4"
193	GI	3	3/4"	3/4"
194	GJ	3	3/4"	3/4"
195	GK	3	3/4"	3/4"
196	GL	3	3/4"	3/4"
197	GM	3	3/4"	3/4"
198	GN	3	3/4"	3/4"
199	GO	3	3/4"	3/4"
200	GP	3	3/4"	3/4"
201	GO	3	3/4"	3/4"
202	GP	3	3/4"	3/4"
203	GQ	3	3/4"	3/4"
204	GR	3	3/4"	3/4"
205	GS	3	3/4"	3/4"
206	GT	3	3/4"	3/4"
207	GU	3	3/4"	3/4"
208	GV	3	3/4"	3/4"
209	GW	3	3/4"	3/4"
210	GX	3	3/4"	3/4"
211	GY	3	3/4"	3/4"
212	GZ	3	3/4"	3/4"
213	HA	3	3/4"	3/4"
214	HB	3	3/4"	3/4"
215	HC	3	3/4"	3/4"
216	HD	3	3/4"	3/4"
217	HE	3	3/4"	3/4"
218	HF	3	3/4"	3/4"
219	HG	3	3/4"	3/4"
220	HH	3	3/4"	3/4"
221	HI	3	3/4"	3/4"
222	HJ	3	3/4"	3/4"
223	HK	3	3/4"	3/4"
224	HL	3	3/4"	3/4"
225	HM	3	3/4"	3/4"
226	HN	3	3/4"	3/4"
227	HO	3	3/4"	3/4"
228	HP	3	3/4"	3/4"
229	HO	3	3/4"	3/4"
230	HP	3	3/4"	3/4"
231	HQ	3	3/4"	3/4"
232	HR	3	3/4"	3/4"
233	HS	3	3/4"	3/4"
234	HT	3	3/4"	3/4"
235	HU	3	3/4"	3/4"
236	HV	3	3/4"	3/4"
237	HW	3	3/4"	3/4"
238	HX	3	3/4"	3/4"
239	HY	3	3/4"	3/4"
240	HZ	3	3/4"	3/4"
241	IA	3	3/4"	3/4"
242	IB	3	3/4"	3/4"
243	IC	3	3/4"	3/4"
244	ID	3	3/4"	3/4"
245	IE	3	3/4"	3/4"
246	IF	3	3/4"	3/4"
247	IG	3	3/4"	3/4"
248	IH	3	3/4"	3/4"
249	II	3	3/4"	3/4"
250	IJ	3	3/4"	3/4"
251	IK	3	3/4"	3/4"
252	IL	3	3/4"	3/4"
253	IM	3	3/4"	3/4"
254	IN	3	3/4"	3/4"
255	IO	3	3/4"	3/4"
256	IP	3	3/4"	3/4"
257	IO	3	3/4"	3/4"
258	IP	3	3/4"	3/4"
259	IQ	3	3/4"	3/4"
260	IR	3	3/4"	3/4"
261	IS	3	3/4"	3/4"
262	IT	3	3/4"	3/4"
263	IU	3	3/4"	3/4"
264	IV	3	3/4"	3/4"
265	IW	3	3/4"	3/4"
266	IX	3	3/4"	3/4"
267	IY	3	3/4"	3/4"
268	IZ	3	3/4"	3/4"
269	JA	3	3/4"	3/4"
270	JB	3	3/4"	3/4"
271	JC	3	3/4"	3/4"
272	JD	3	3/4"	3/4"
273	JE	3	3/4"	3/4"
274	JF	3	3/4"	3/4"
275	JG	3	3/4"	3/4"
276	JH	3	3/4"	3/4"
277	JI	3	3/4"	3/4"
278	IJ	3	3/4"	3/4"
279	JK	3	3/4"	3/4"
280	IL	3	3/4"	3/4"
281	JM	3	3/4"	3/4"
282	JN	3	3/4"	3/4"
283	JO	3	3/4"	3/4"
284	JP	3	3/4"	3/4"
285	JO	3	3/4"	3/4"
286	JP	3	3/4"	3/4"
287	JK	3	3/4"	3/4"
288	JL	3	3/4"	3/4"
289	JM	3	3/4"	3/4"
290	JN	3	3/4"	3/4"
291	JO	3	3/4"	3/4"
292	JP	3	3/4"	3/4"
29				



1480A Cover



1480A Z Assembly

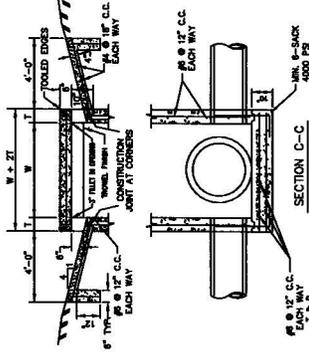


INLET SIZE	T	W
2" SQUARE	7"	7'-0"
4" SQUARE	7"	4'-0"
5" SQUARE	8"	5'-0"
6" SQUARE	8"	6'-0"
7" SQUARE	9"	7'-0"
8" SQUARE	9"	8'-0"

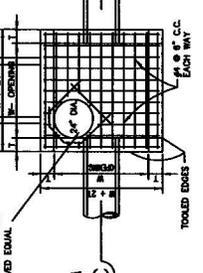
FOR LOWER PORTIONS OF SQUARE DROP SQUARE MANHOLE AND ELIMINATE INLET RING AND COVER.

GENERAL NOTES:

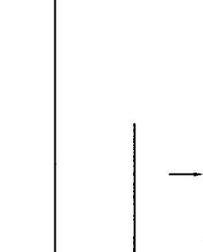
- MATERIAL AND WORKMANSHIP SHALL CONFORM WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR CONCRETE MANHOLE.
- ALL DIMENSIONS SHALL BE TAKEN TO THE CENTER OF BARS, UNLESS OTHERWISE NOTED.
- FOR DETAILS OF REINFORCING OF LOWER PORTIONS OF INLET SEE APPROPRIATE SQUARE MANHOLE DETAILS.
- DEPTH OF DROP INLET FROM FINISHED GRADE TO TOP OF MANHOLE SHALL BE SHOWN ON PLANS AT LOCATION OF INLET.
- ALL STANDARD DROP INLETS SHALL HAVE ONE OPENING ON EACH SIDE UNLESS SHOWN ON PLANS.



STANDARD TYPE 'Y' INLET

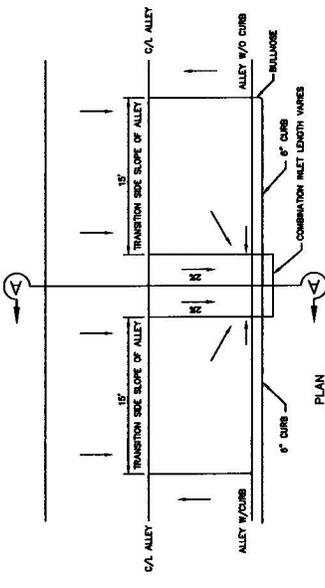
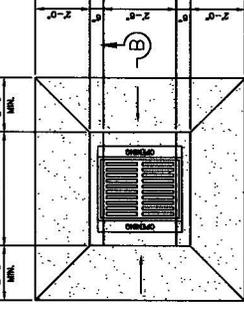


STANDARD GRADE INLET

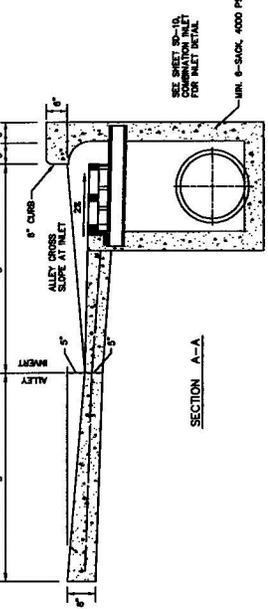


- NOTE:
- BASE & HAYS MATS SHALL BE PLACED IN POSITION W/O SOIL COMPACTED TO FINISH SURFACE.
  - TO BE USED IN ROWS ADJACENT TO ROADWAY.

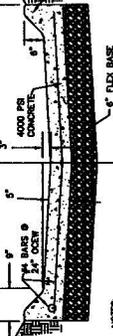
PLAN



SECTION A-A



NON-CURBED FLUME



- NOTES:
- IF FLUME IS 7' OR WIDER, USE PIPE BOLLARDS 7' X 8' DIA. AND SPACED TO CENTERLINE PLACE AT BOTH START AND END OF FLUME.
  - CONTRACTOR SHALL SIDE SLOPE AS SPECIFIED.
  - IF MINIMUM INTERNAL STRENGTH BASE COMPACTED TO 95% STANDARD PROCTOR UNDER CONCRETE FOR CURBED OR NON-CURBED TUBES.

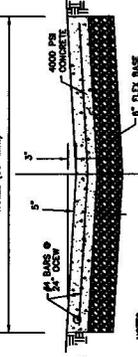
CURBED FLUME



- NOTES:
- IF FLUME IS 7' OR WIDER, USE PIPE BOLLARDS 7' X 8' DIA. AND SPACED TO CENTERLINE PLACE AT BOTH START AND END OF FLUME.
  - CONTRACTOR SHALL SIDE SLOPE AS SPECIFIED.
  - IF MINIMUM INTERNAL STRENGTH BASE COMPACTED TO 95% STANDARD PROCTOR UNDER CONCRETE FOR CURBED OR NON-CURBED TUBES.

NOTE:

TESTING WILL BE REQUIRED ON ALL CAST-IN-PLACE STRUCTURE



- NOTES:
- IF FLUME IS 7' OR WIDER, USE PIPE BOLLARDS 7' X 8' DIA. AND SPACED TO CENTERLINE PLACE AT BOTH START AND END OF FLUME.
  - CONTRACTOR SHALL SIDE SLOPE AS SPECIFIED.
  - IF MINIMUM INTERNAL STRENGTH BASE COMPACTED TO 95% STANDARD PROCTOR UNDER CONCRETE FOR CURBED OR NON-CURBED TUBES.

NON-CURBED FLUME



- NOTES:
- IF FLUME IS 7' OR WIDER, USE PIPE BOLLARDS 7' X 8' DIA. AND SPACED TO CENTERLINE PLACE AT BOTH START AND END OF FLUME.
  - CONTRACTOR SHALL SIDE SLOPE AS SPECIFIED.
  - IF MINIMUM INTERNAL STRENGTH BASE COMPACTED TO 95% STANDARD PROCTOR UNDER CONCRETE FOR CURBED OR NON-CURBED TUBES.

CURBED FLUME



- NOTES:
- IF FLUME IS 7' OR WIDER, USE PIPE BOLLARDS 7' X 8' DIA. AND SPACED TO CENTERLINE PLACE AT BOTH START AND END OF FLUME.
  - CONTRACTOR SHALL SIDE SLOPE AS SPECIFIED.
  - IF MINIMUM INTERNAL STRENGTH BASE COMPACTED TO 95% STANDARD PROCTOR UNDER CONCRETE FOR CURBED OR NON-CURBED TUBES.

REV.	COMMENTS	BY	DATE

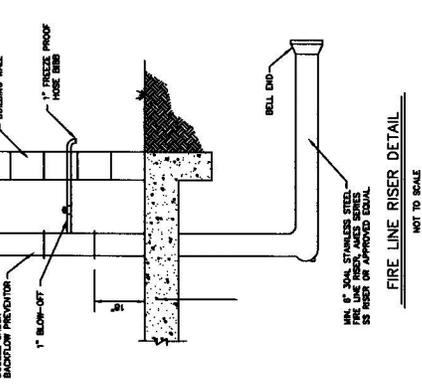
**Rowlett**  
CITY OF ROWLETT, TEXAS  
DEPARTMENT OF PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE  
GRATE INLET  
STANDARD "Y" INLET  
ALLEY COMBINATION INLET  
CURBED AND NON-CURBED FLUME

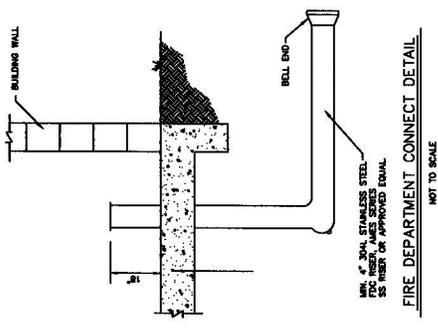
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SHEET: [ ]  
SD-11



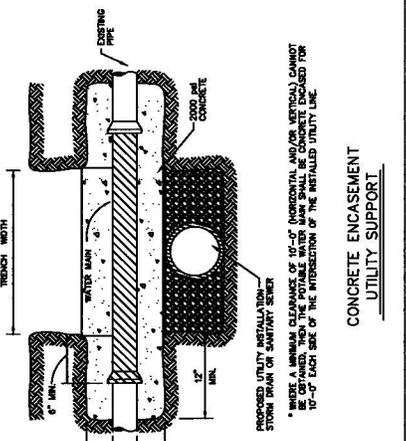




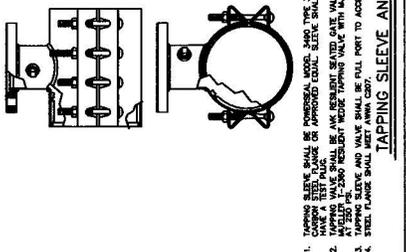
FIRE LINE RISER DETAIL  
NOT TO SCALE



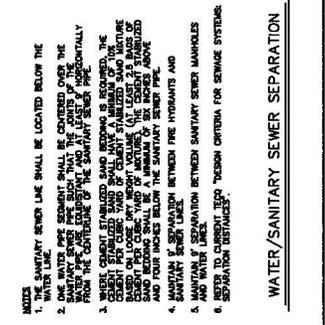
FIRE DEPARTMENT CONNECT DETAIL  
NOT TO SCALE



CONCRETE ENCASUREMENT  
UTILITY SUPPORT

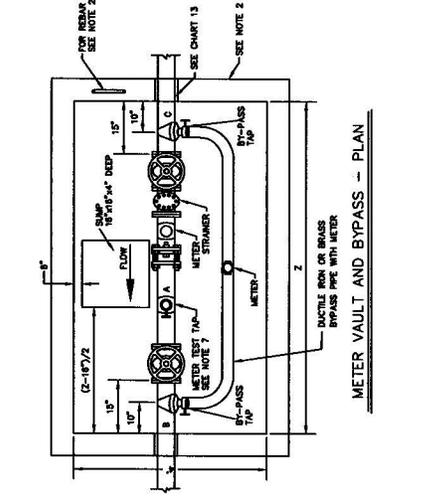


TAPPING SLEEVE AND VALVE

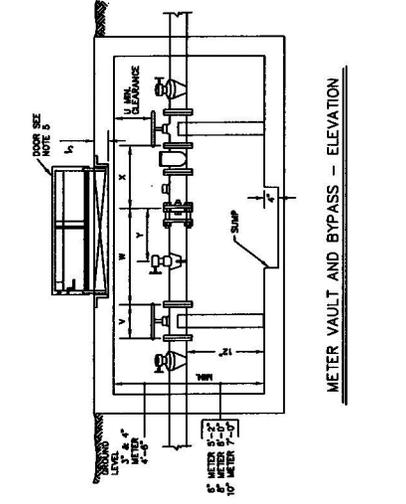


WATER/SANITARY SEWER SEPARATION

- NOTES
1. WATER MAIN SANITARY SEWER LINE SHALL BE LOCATED BELOW THE WATER LINE.
  2. ONE WATER PIPE SEGMENT SHALL BE COVERED OVER THE WATER LINE. THE WATER LINE SHALL BE COVERED WITH A MINIMUM OF 18\"/>
  - 3. SEWER CHAINS SHALL BE LOCATED AND COVERED WITH A MINIMUM OF 18\"/>
  - 4. SEWER CHAINS SHALL BE COVERED WITH A MINIMUM OF 18\"/>
  - 5. SEPARATION BETWEEN SANITARY SEWER MANHOLES AND WATER LINES SHALL BE MAINTAINED.
  - 6. REFER TO CURRENT TDD DESIGN CRITERIA FOR SEWER SYSTEMS.



METER VAULT AND BYPASS - PLAN



METER VAULT AND BYPASS - ELEVATION

METER VAULT		IRRIGATION											
DOMESTIC		U	V	W	X	Y	Z	U	V	W	X	Y	Z
3"	25'	6"	10-1/2"	24"	6-8"	3"	20"	6"	10-1/2"	18"	6"	6-8"	6-8"
4"	27'	6"	15-1/2"	28"	7-7"	4"	22"	6"	15-1/2"	20"	6"	10-1/2"	13"
6"	29'	6"	18-1/2"	32"	8-8"	6"	24"	6"	18-1/2"	24"	6"	12-1/2"	17"

- METER VAULT AND BY-PASS SPECIFICATIONS
1. NOTIFY THE PUBLIC WORKS DEPARTMENT PRIOR TO CONSTRUCTION OF VAULT OR BY-PASS ASSEMBLY.
  2. THE METER VAULT CAN BE EITHER POURED IN PLACE OR PRECAST/CONCRETE. THE VAULT SHALL BE CONSTRUCTED WITH A MINIMUM OF 18" THICK CONCRETE WALL AND 18" THICK CONCRETE FLOOR. THE VAULT SHALL BE FINISHED WITH A MINIMUM OF 1/2" THICK ALUMINUM ANGLE ON THE INSIDE OF THE VAULT.
  3. THE VAULT SHALL NOT BE SET IN ANY DITCH OR TRENCH AREAS AND MUST BE LOCATED IN A UTILITY EASEMENT.
  4. A DRAWING WITH THE EXACT MEASUREMENTS OF THE METER VAULT AND BY-PASS SHALL BE SUBMITTED TO THE CITY FOR APPROVAL FOR ALL METERS 3" AND LARGER.
  5. THE METER VAULT SHALL BE A MINIMUM OF 18" X 18" X 18" IN SIZE. THE METER VAULT SHALL BE CONSTRUCTED WITH A MINIMUM OF 18" THICK CONCRETE WALL AND 18" THICK CONCRETE FLOOR. THE VAULT SHALL BE FINISHED WITH A MINIMUM OF 1/2" THICK ALUMINUM ANGLE ON THE INSIDE OF THE VAULT.
  6. THE METER VAULT SHALL BE FINISHED WITH A MINIMUM OF 1/2" THICK ALUMINUM ANGLE ON THE INSIDE OF THE VAULT.
  7. THE CONCRETE SHALL BE FINISHED WITH A MINIMUM OF 1/2" THICK ALUMINUM ANGLE ON THE INSIDE OF THE VAULT. THE CONCRETE SHALL BE FINISHED WITH A MINIMUM OF 1/2" THICK ALUMINUM ANGLE ON THE INSIDE OF THE VAULT.
  8. THE STRAINER AND METER SHALL BE PROVIDED BY THE CITY OF ROWLETT AT THE BOTTOM OF THE METER VAULT. THE STRAINER SHALL BE A MINIMUM OF 1/2" THICK ALUMINUM ANGLE ON THE INSIDE OF THE VAULT.
  9. THE DATE VALVES SHALL BE MODEL NO. A-2300-9 FOR 3" AND MODEL NO. A-2075-9 FOR 4" AND UP, PLUNGED BOTH ENDS.
  10. THE BOTTOM OF THE METER VAULT MUST BE 6" THICK CONCRETE WITH A REBAR. THE REBAR SHALL BE A MINIMUM OF 1/2" THICK ALUMINUM ANGLE ON THE INSIDE OF THE VAULT.
  11. UNDER EACH VALVE WILL BE A CONCRETE SUPPORT.
  12. THE TOP OF VAULT SHALL BE A MINIMUM OF 4-1/2 FEET FROM FINISHED GROUND OR TOP OF DRAIN PIPE.

PIPE SIZE	BY-PASS TAPS	CAST-IN-PLACE WALL NUMBER AND LINK SEALS	LINK SEALS
3"	ROCKWELL NO. 377-1000-100	NO. LS-320-C	NO. LS-320-C
4"	ROCKWELL NO. 377-1000-100	NO. LS-400-C	NO. LS-400-C
6"	ROCKWELL NO. 377-1000-100	NO. LS-600-C	NO. LS-600-C
10"	ROCKWELL NO. 377-1000-100	NO. LS-1000-C	NO. LS-1000-C

- NOTES
1. ALL SERVICES BARBERS SHALL HAVE BRASS IMPLES AND NO. 7500 BRASS OR APPROVED EQUAL DATE VALVES.
  2. BREAKING OF THE WALL WITH A JACKHAMMER OR USING PRE-CUT THICK CUT PANELS WILL NOT BE PERMITTED.
  3. APPROVED EQUAL WILL BE ALLOWED FOR ALL ITEMS SPECIFIED.

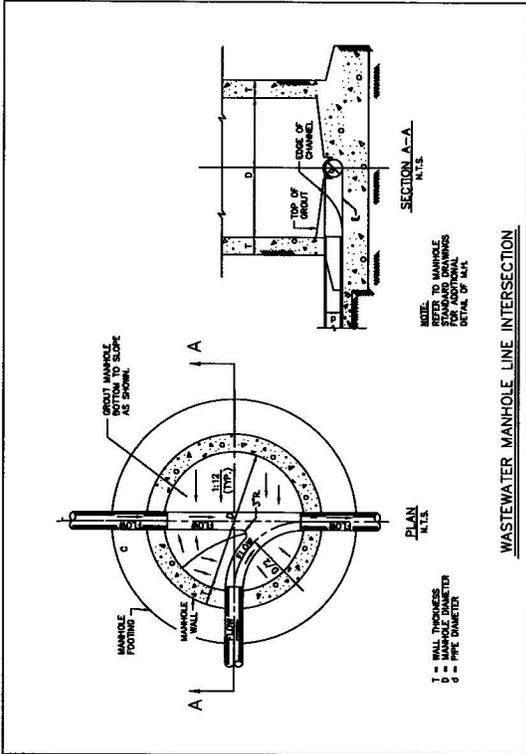
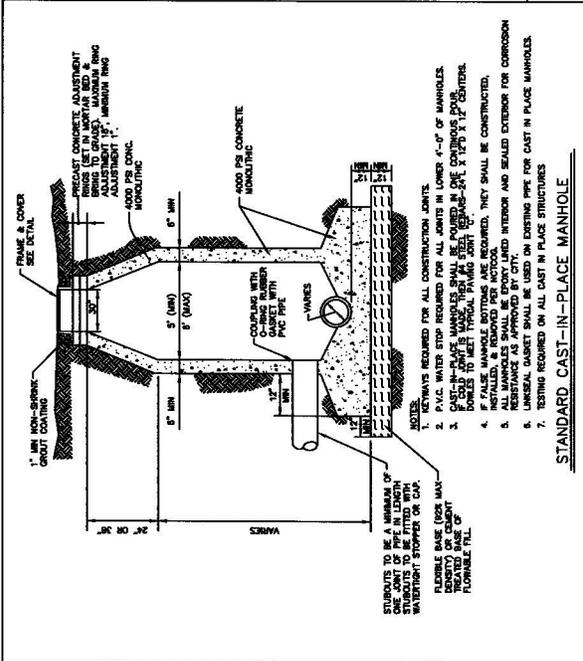
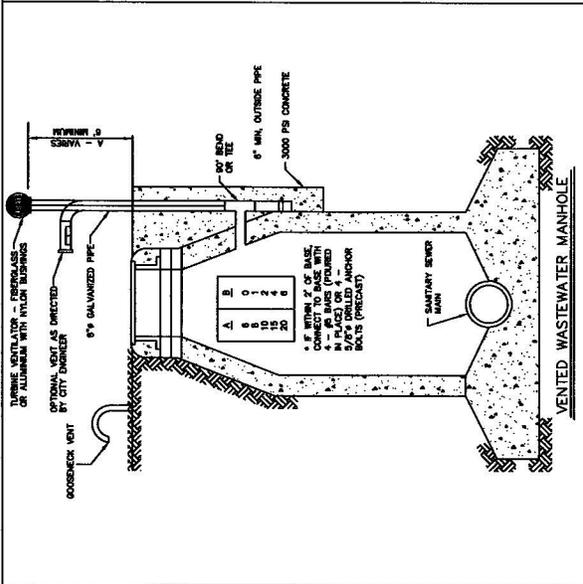
REV.	COMMENTS	BY	DATE
2013	COMPLETE SHEET REVISION	MTOR	07/19/2013
2013	ADDED TAPPING SLEEVE	SDAP	10/28/2013

**Rowlett CITY OF ROWLETT, TEXAS**  
DEPARTMENT OF PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS  
WATER

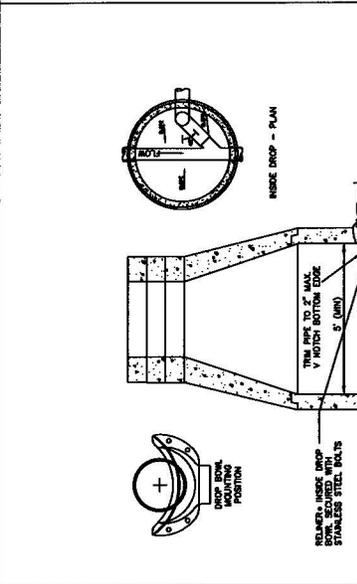
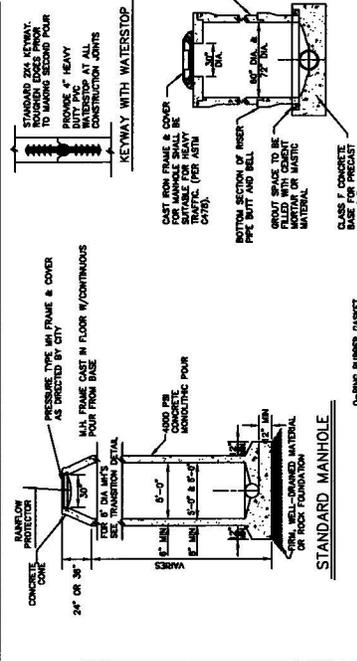
WATER GENERAL NOTES  
METER VAULTS, TAPPING SLEEVES AND VALVES, FIRE RISERS AND TCEQ REQUIREMENTS

DESIGNER: MTOR  
CHECKED: SDAP  
PROJECT NO.: SD-14



**GENERAL NOTES**

- SANITARY SEWER PIPE MAINS LESS THAN 10' DEPTH SHALL BE 12" DIA. PIPE. SEWER PIPE GREATER THAN 10' DEPTH SHALL BE 15" DIA. PIPE. ALL SEWER PIPE SHALL CONFORM TO CURRENT ASTM DESIGNATIONS FOR PVC PIPE.
- ALL SANITARY SEWER LATERALS SHALL INCLUDE 4" TEE, PIPE END, PIPE, AND STOPPER INSTALLED AT THE CENTER OF EACH LATERAL. ALL LATERALS SHALL BE 12" DIA. PIPE. ALL LATERALS REQUIRE M.H. AT MAIN SEWER PIPE.
- UNLESS OTHERWISE NOTED, ALL MATERIAL AND CONSTRUCTION SHALL CONFORM TO THE CITY OF ROWLETT STANDARD SPECIFICATIONS.
- DROP MANHOLE REQUIRED FOR CONNECTIONS GREATER THAN 2' HEIGHT FROM MAIN TOWARD TO 18" DIAMETER OR LARGER PIPE.
- THE LOCATION OF ALL MANHOLES, CLEANOUTS, AND SERVICES SHALL BE DETERMINED BY THE CITY ENGINEER.
- SPACING OF MANHOLES AND CLEANOUTS SHALL BE AS SPECIFIED IN THE CITY OF ROWLETT WATER UTILITIES DESIGN MANUAL OR AS DIRECTED BY THE PE DIRECTOR.
- MANHOLES SHALL BE CONSTRUCTED TO CONFORM TO THE CITY OF ROWLETT STANDARD SPECIFICATIONS.
- NO SEWER SERVICE LINE CONNECTIONS SHALL BE CONSTRUCTED DEEPER THAN 15 FEET.
- ALL NEW MANHOLES SHALL BE LINED WITH UNBURNED 150 MI. THICKNESS 18" DIA. OR APPROVED EQUAL. ENGINEER WILL APPROVE COATING THICKNESS FOR CORROSION PROTECTION TYPE OF MANHOLE.
- MINIMUM SIZE FOR SEWER MAIN SHALL BE 8" NOMINAL DIAMETER.



**COMMENTS**

REV.	DATE

**ROWLETT CITY OF ROWLETT, TEXAS**  
DEPARTMENT OF PUBLIC WORKS

**STANDARD CONSTRUCTION DETAILS**  
SANITARY SEWER

**MANHOLES**  
TRANSITIONS & ROOF OPTIONS

DESIGN: [ ]  
DRAWN: [ ]  
CHECKED: [ ]  
PROJECT NO.: [ ]  
SHEET: SD-15

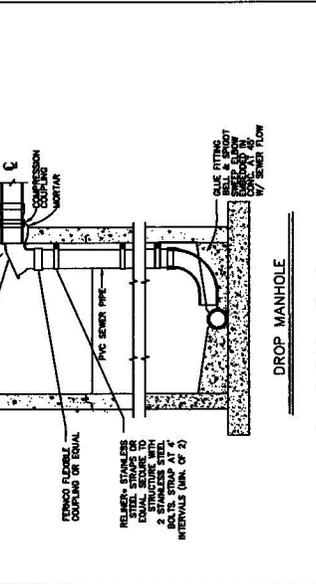
**CLASSES OF CONCRETE**

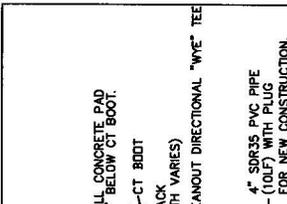
CLASS	MIN. COMPRESSIVE STRENGTH AT 28 DAYS (PSI)	MAX. ALLOWABLE CRACK WIDTH AT RATIO
A	3000	0.5
B	2000	0.0
C	4000	0.5

**PRECAST CONCRETE FLAT TOP MANHOLE**

NOTES:

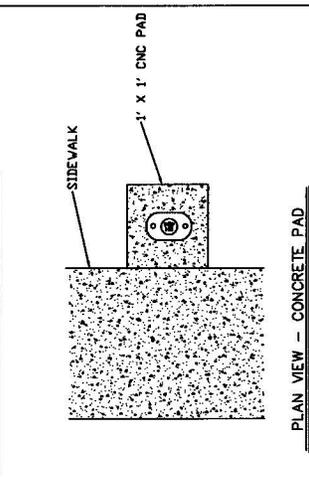
- KEYWAYS REQUIRED FOR ALL CONSTRUCTION JOINTS.
- P.V.C. WATER STOP REQUIRED FOR ALL JOINTS IN LOWER 4'-0" OF MANHOLES.
- CAST-IN-PLACE MANHOLES SHALL BE Poured IN ONE CONTINUOUS POUR. JOINTS SHALL BE MET TYPICAL TRAP JOINT DETAIL.
- IF FALSE MANHOLE BOTTOMS ARE REQUIRED, THEY SHALL BE CONSTRUCTED.
- ALL MANHOLES SHALL BE EROSION AND SEALED EXTERIOR FOR CORROSION RESISTANCE AS APPROVED BY CITY.
- LINEAR GROUT SHALL BE USED ON EXISTING PIPE FOR CAST IN PLACE MANHOLES.
- TESTING REQUIRED ON ALL CAST IN PLACE STRUCTURES.





- NOTES:**
1. WASTEWATER CLEANOUT SHALL BE BASE & HAYS #404 BY OWNER.
  2. SLOPE OF LATERAL TO BE 1% MIN. 2% MAX UNLESS INSTRUCTED OTHERWISE.
  3. THE WASTEWATER LATERAL SHALL BE CONNECTED TO BUILDING LATERAL AND CONSTRUCTED IN SUCH MANNER AS TO CLEAR EXISTING UTILITIES AND PROPOSED UTILITIES. VERTICAL BENDS (22.5° MAX) MAY BE USED IF APPROVED BY CITY.
  4. THE MAINLINE LATERAL CONNECTION TO THE PRIVATE BUILDING LATERAL SHALL BE 10' FEET INTO PROPERTY.
  5. THE CLEANOUT STACK & CASTING MAY BE PLACED IN THE PARKWAY, VEHICLE TRAFFIC AREAS, OR SIDEWALK AS APPROVED BY CITY.

**TYPICAL SERVICE CONNECTION DETAIL**



**PLAN VIEW - CONCRETE PAD**

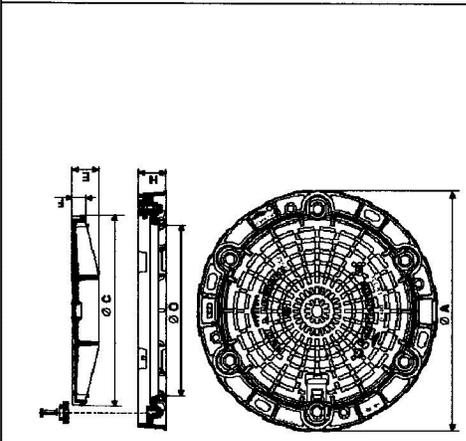
REV.	COMMENTS	BY	DATE

**CITY OF ROWLETT, TEXAS**  
DEPARTMENT OF PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS  
SANITARY SEWER

BORE W/CASING & CARRIER PIPE  
MANHOLE COVERS - TYPICAL SERVICE  
TRENCH CROSSING

DESIGNER: [blank]  
DRAWN: [blank]  
CHECKED: [blank]  
PROJECT NO.: [blank]  
SHEET: SD-16



Manhole cover and frame shall be called CAMSEAL, PAMTIGHT or approved equal. Cover and frame shall be manufactured from ductile iron.

Covers shall be finished to the frame by air chipping above held by stainless steel bolts.

Covers shall incorporate a sealed handling bar and be one man operable using standard tools, and shall be capable of withstanding a full load of 80,000 lbs.

Frames shall be circular and be available in a 32 inch clear opening. The frame depth shall not exceed 4 inches, and the flange shall incorporate beading slots and lift tabs.

Frames shall incorporate a weathering lip to prevent the escape of air and water for 1 hour minimum weathering cover. Cover weight shall be black coated.

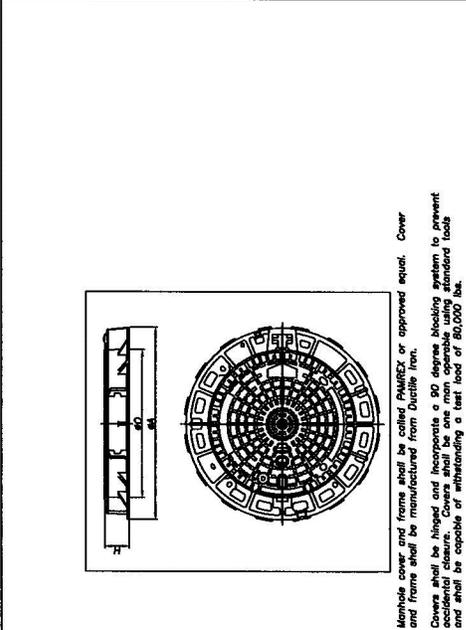
Frame weight: 167 lbs. Cover weight: 185 lbs. Total weight: 352 lbs.

CAMSEAL / PAMTIGHT is available from Jim Car Sales, Inc. (800) 838-7377

**CAMSEAL / PAMTIGHT 32 INCH MANHOLE COVER AND FRAME**

NTS

- NOTES:**
1. ALL MANHOLE RINGS AND LIDS SHALL BE COATED FOR CORROSION RESISTANCE BY MANUFACTURER.
  2. ALL MANHOLE RINGS AND LIDS SHALL BE MINIMUM 30" DIAMETER.
  3. ALL WATER CROSSINGS AND LIDS SHALL BE DOMESTIC MATERIAL ONLY.
  4. TCEO REQUIREMENTS.



Manhole cover and frame shall be called PAMREX or approved equal. Cover and frame shall be manufactured from ductile iron.

Covers shall be finished and incorporate a 90 degree beading system to prevent water from running down the cover and into the manhole.

Covers shall be capable of withstanding a full load of 80,000 lbs.

Frames shall be circular, incorporate a sealing ring and a fiber plug in the center. The frame shall be finished with a 90 degree beading system, beading slots, holes, and lifting eyes.

All components shall be black coated.

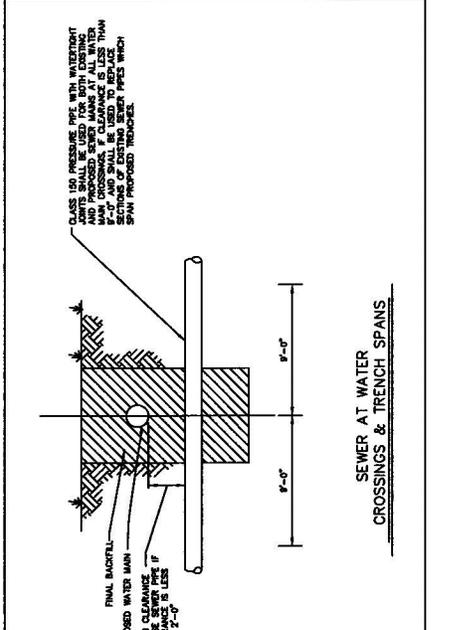
DIMENSIONS (INCHES)		WEIGHT (LBS)		REFERENCE
A	H	COVER AND COVER FRAME	ONLY	
36.4	31.5	269	182	IN. 32 18 TD

Frame weight: 167 lbs.  
Cover weight: 182 lbs.  
Total weight: 349 lbs.

NOTE: COVERS FOR LOCATIONS WHERE THE FIN ELEVATIONS ARE BELOW THE 100 YEAR FLOOD PLANE ELEVATION SHALL BE PAMTIGHT 32\"/>

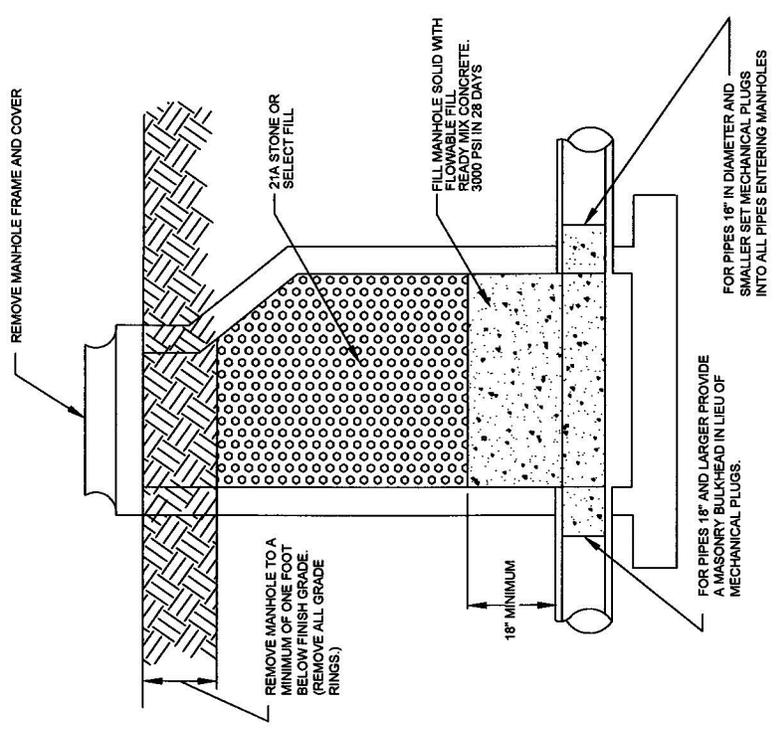
**PAMREX 32 INCH MANHOLE COVER AND FRAME**

NTS

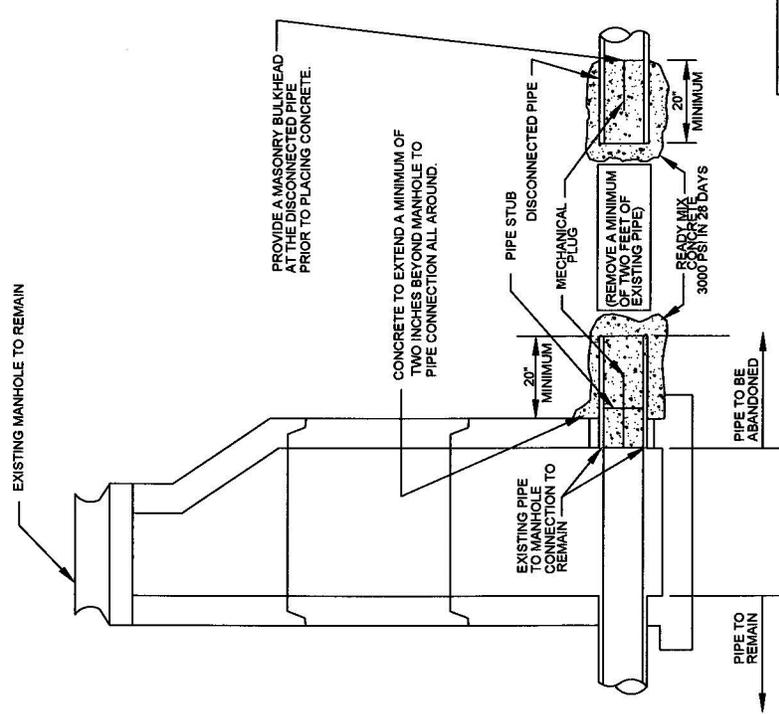


**SEWER AT WATER CROSSINGS & TRENCH SPANS**





SANITARY SEWER MANHOLE ABANDONMENT



SANITARY SEWER PIPE ABANDONMENT AT A MANHOLE

REV.	COMMENTS	BY	DATE

**Rowlett**  
CITY OF ROWLETT, TEXAS  
DEPARTMENT OF PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS  
SANITARY SEWER

AERIAL CROSSING  
PRECAST CONCRETE PIPE MANHOLE

DESIGN: [ ]  
CHECKED: [ ]  
DATE: [ ]  
PROJECT NO: [ ]  
SHEET: [ ]  
SD-178

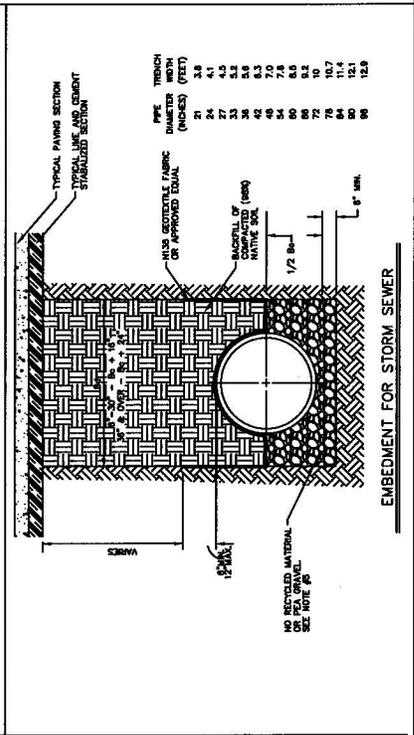
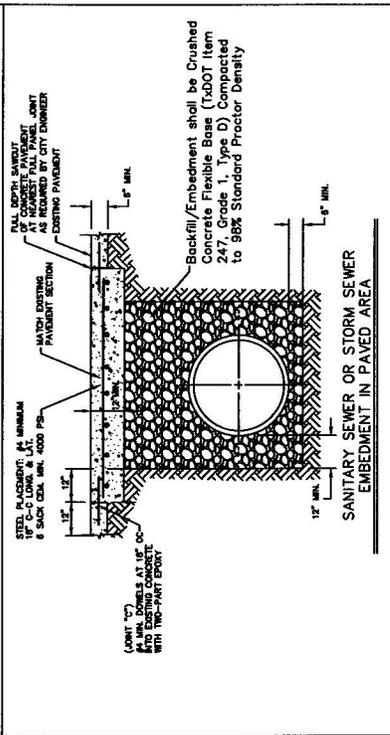
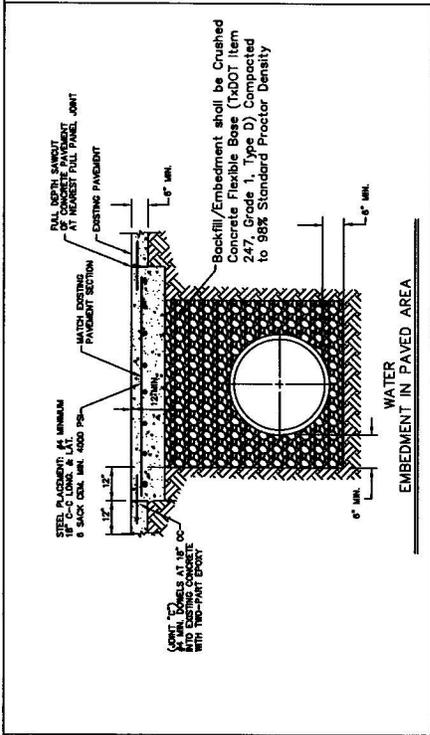
**NOTES:**

1. LOAD CALCULATIONS ON ENCASUREMENT SHALL BE SHOWN IN THE PROFILES FOR ALL LINES.
  2. NO WATER, LIME OR FLOCCING ALLOWED UNDER PAVEMENTS. NO WATER, LIME OR FLOCCING OF ANY KIND SHALL BE USED IN ANY MANNER. SETTING PROCEDURE SHALL BE APPROVED BY THE P.W. DIVISION.
  3. ALL MATERIALS SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY EXCEPT AS NOTED OTHERWISE. ALL MATERIALS SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY.
  4. CLASS B CONCRETE MIN. 4 SACK, WATER CEMENT RATIO 8, 28-DAY MINIMUM STRENGTH, 2000 PSI.
  5. CRUSHED STONE GRANULATION (AGGREGATE GRADE 4)
- | SIZE SIZE | % RETAINED |
|-----------|------------|
| 3/4" INCH | 0          |
| 1/2" INCH | 5          |
| 3/8" INCH | 10         |
| NO. 4     | 75-100     |
6. GRANULAR MATERIAL SHALL BE FREE FLOWING SUCH AS SAND OR HYDRAULICALLY GRADED CRUSHED STONE. ALL MATERIALS SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY. ALL MATERIALS SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY.
  7. SELECT MATERIAL SHALL BE GRAVEL, FINE ROCK CUTTINGS, SAND, SANDY LOAM, AND MATERIALS FREE OF CLAY AND ORGANIC MATTER. ROCK CUTTINGS SHALL HAVE NO DIMENSION OVER 2 INCHES.
  8. FOR MAINS 30" OR LARGER, USE 1/8" B<sub>1</sub> SHALL BE TAKEN AS 6".
  9. CONCRETE STABILIZED BACKFILL SHALL CONSIST OF A MIXTURE OF CLEAN SAND AND TWO (2) BAGS OF CEMENT PER CUBIC YARD OF SAND. ALL MATERIALS SHALL BE BLENDED IN A CONCRETE MIXER OR PORTLAND CEMENT SHALL BE PLACED IN A CONCRETE MIXER AND MIXED THOROUGHLY.
  10. BACKFILL SHALL BE A TYPE A GRADE 1 MATERIALS SET FORTH IN TxDOT ITEM 247, "FLEXIBLE BASE" AND SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY.
  11. ASPHALT STABILIZED BASE SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN TxDOT ITEM 247, "FLEXIBLE BASE" AND SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY.
  12. TRENCH SAFETY PROVISIONS SHALL APPLY TO ALL TRENCHES AND EXCAVATIONS.
  13. BARRICADE AND TRAFFIC CONTROL PLANS SHALL BE REQUIRED AND SHALL HAVE THE APPROVAL OF THE CITY ENGINEER.
  14. IF CLASS "D" EMBEDMENT IS SPECIFIED AND IF LIGHTLY COMPACTED SELECT MATERIAL IS USED FOR THE EMBEDMENT, THE MINIMUM UNDERCUT SHALL BE 6" EXCEPT WHERE CONCRETE GRADE IS USED.
  15. IN ROCK TRENCHES, THE MINIMUM UNDERCUT WILL BE 6" EXCEPT WHERE CONCRETE GRADE IS USED.

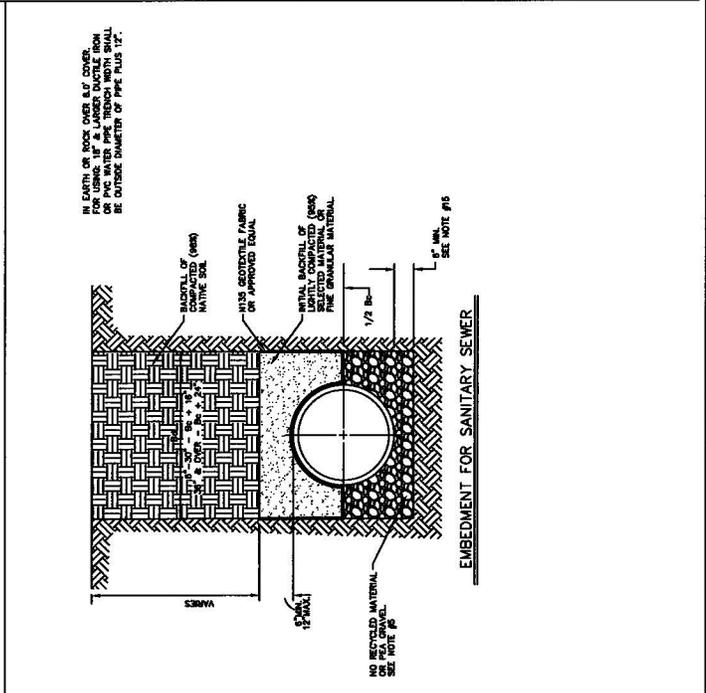
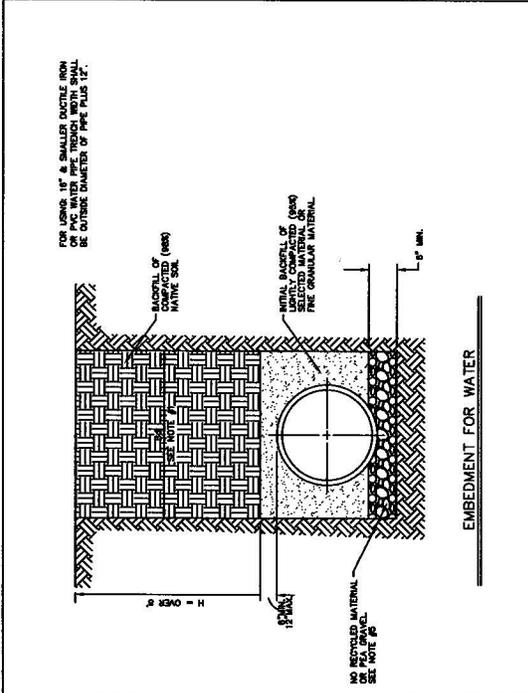
REV.	COMMENTS	BY	DATE

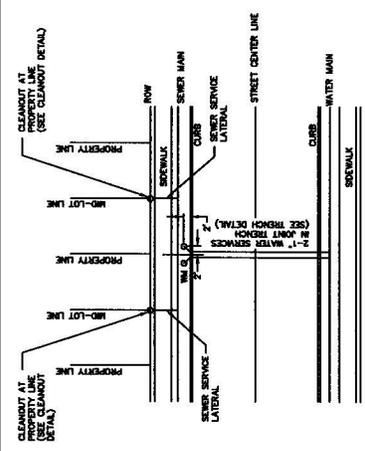
**City of Rowlett, Texas**  
DEPARTMENT OF PUBLIC WORKS  
STANDARD CONSTRUCTION DETAILS  
UTILITIES  
EMBEDMENT and STREET REPAIR

DESIGNER	PROJECT NO.	SHEET
		SD-18

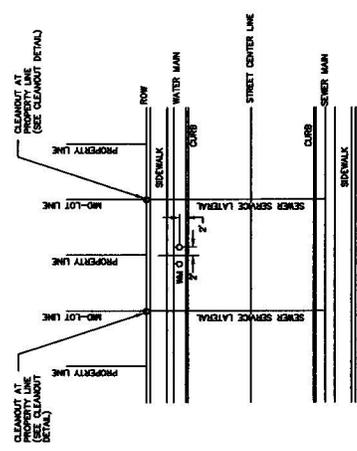


PIPE DIAMETER (INCHES)	TRENCH WIDTH (FEET)
21	3.8
24	4.1
27	4.5
30	4.8
36	5.8
42	6.3
48	7.0
54	7.7
60	8.5
66	9.2
72	10.7
84	11.4
90	12.1
96	12.8

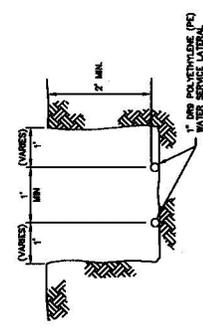




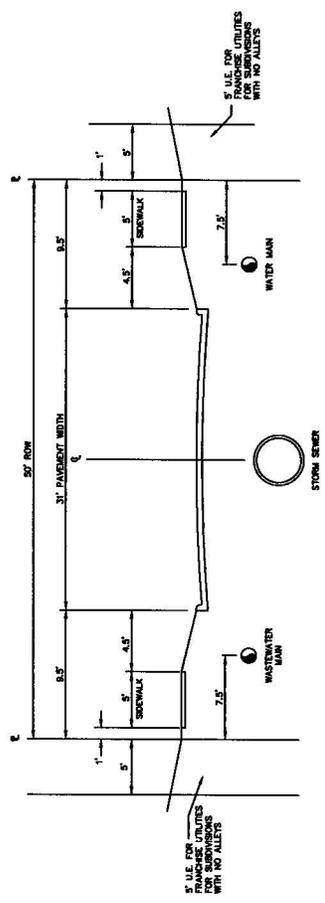
SHORT SEWER & LONG WATER SERVICE DETAIL



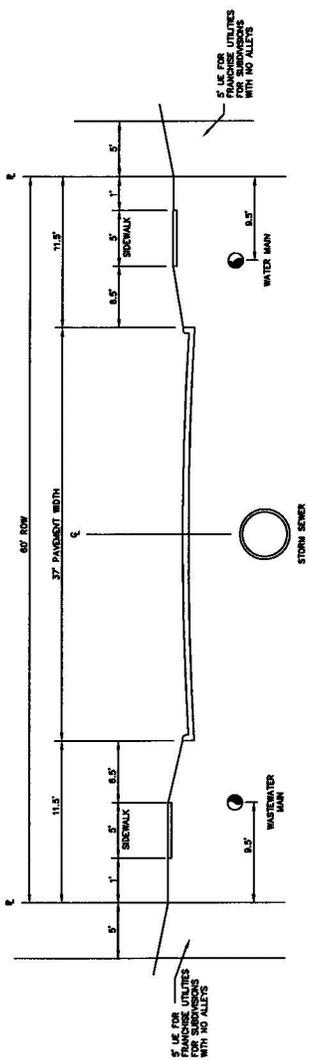
LONG SEWER & SHORT WATER SERVICE DETAIL



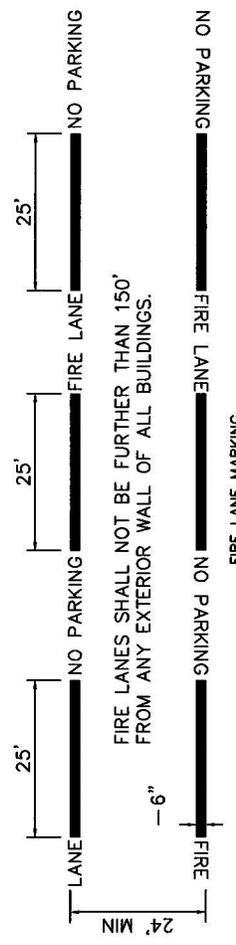
TYPICAL RESIDENTIAL WATER SERVICE JOINT TRENCH DETAIL



MINOR RESIDENTIAL STREET



RESIDENTIAL COLLECTOR STREET



FIRE LANES SHALL NOT BE FURTHER THAN 150' FROM ANY EXTERIOR WALL OF ALL BUILDINGS.

REV.	COMMENTS	BY	DATE

**Rowlett** CITY OF ROWLETT, TEXAS  
DEPARTMENT OF PUBLIC WORKS

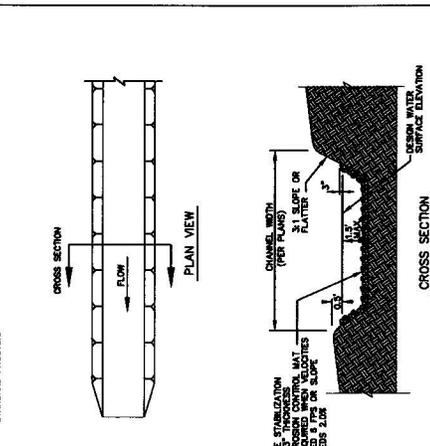
STANDARD CONSTRUCTION DETAILS  
WATER AND SANITARY SEWER

UTILITY LOCATIONS & MISC

DESIGN: JAWANEH	SCALE: AS SHOWN	PROJECT NO: 11-06-2010	SHEET: SD-19
CHECKED: [ ]	DATE: [ ]		

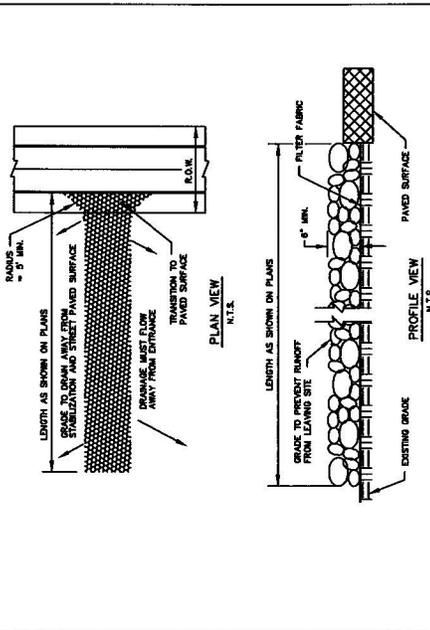
**GENERAL NOTES - INTERCEPTOR SWALE**

1. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS AND OTHER MATERIAL WHICH INTERFERE WITH THE PROPER FUNCTIONING OF THE SWALE SHALL BE REMOVED.
2. THE SWALE SHALL BE RECLAIMED OR SHAVED TO LIKE GRADE AND CROSS-SECTION AS REQUIRED TO MEET DESIGN SPECIFIED WHEN AND BE NEARLY FLOW. PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPED FLOW.
3. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE DISPOSED OF IN AN APPROVED SPOIL SITE SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE SWALE.
4. SWALE SHALL BE COMPLETED TO A SLOPED AND DRAINAGE AREA.
5. THE SWALE LOCATION SHALL BE ADJUSTED TO MEET FIELD CONDITIONS IN ORDER TO UTILIZE THE MOST SATISFACTORY OUTLET.
6. STABILIZATION IS REQUIRED WHEN VELOCITIES EXCEED 6 FEET PER SECOND OR WHEN GRADES EXCEED 2.0% STABILIZATION SHALL BE PROVIDED TO PREVENT EROSION CONTROL MATS, VEGETATION OR HIGH VELOCITY EROSION CONTROL MATS. VEGETATION MAY BE USED FOR VELOCITIES LESS THAN 6 FEET PER SECOND.
7. MINIMUM COMPACTION FOR THE SWALE SHALL BE 90 PERCENT STANDARD PROCTOR.



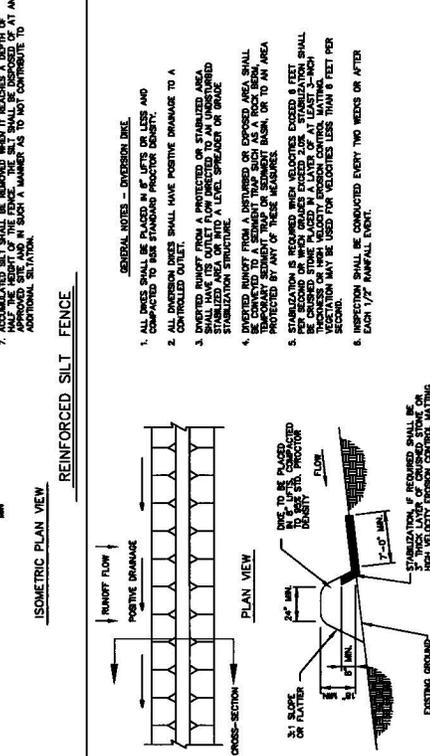
**GENERAL NOTES - STABILIZED CONSTRUCTION ENTRANCE**

1. STONE SHALL BE 3 TO 8 INCH DIAMETER CRUSHED ROCK ON ACCEPTABLE CRUSHED PORTLAND CEMENT CONCRETE.
2. LENGTH SHALL BE SHOWN ON PLANS, WITH A MINIMUM LENGTH OF 30 FEET FOR LOTS WHICH ARE LESS THAN 10 FEET FROM EDGE OF PAVEMENT. THE MINIMUM DEPTH IN ALL OTHER CASES SHALL BE 10 FEET.
3. THE THICKNESS SHALL NOT BE LESS THAN 6 INCHES.
4. THE WIDTH SHALL BE NO LESS THAN THE FULL WIDTH OF ALL PORTS OF INGRESS OR EGRESS.
5. WHEN NECESSARY, WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO THE STABILIZED CONSTRUCTION ENTRANCE. THIS MAY BE ACCOMPLISHED BY PROVIDING A WASH PIT WITH COARSE STONE WITH DRAINAGE FLOWING AWAY FROM BOTH THE STREET AND THE STABILIZED CONSTRUCTION ENTRANCE. APPROVED METHODS.
6. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRUCKS OR FLOWING OF SEDIMENT ONTO PAVED SURFACES. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL PAVED SURFACES MUST BE REPAVED IMMEDIATELY.
7. THE ENTRANCE MUST BE PROPERLY GRADED OR INCORPORATE A DRAINAGE SWALE TO PREVENT RUNOFF FROM LEAVING THE CONSTRUCTION SITE.



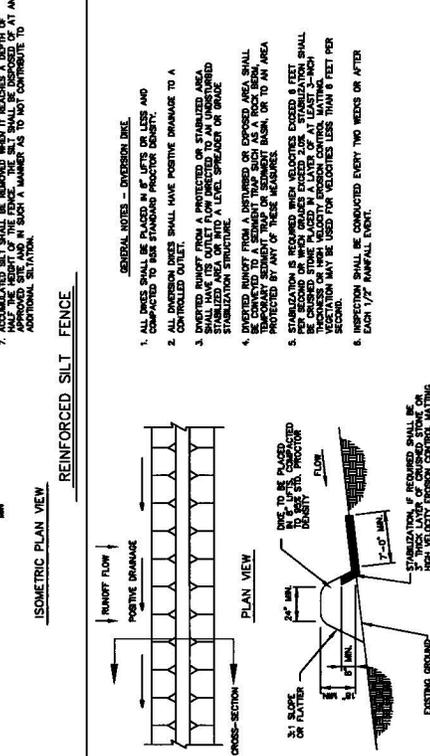
**GENERAL NOTES - SILT FENCE**

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE AUTHORIZED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF ONE FOOT.
2. MESH SHALL BE 24 INCHES WIDE AND 4 INCHES HIGH WITH A MINIMUM OF 10 MESH PER LINEAL FOOT. THE MESH SHALL BE PLACED ON THE LINE OF FLOW. WHERE FENCE CANNOT BE PLACED ON THE LINE OF FLOW, THE FENCE SHALL BE PLACED ON THE DOWNHILL SIDE TO PREVENT FLOW FROM SEPARATING FENCE.
3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND TO BE COVERED WITH COMPACTED MATERIAL.
4. SILT FENCE SHALL BE INSTALLED WITH EACH STEEL SUPPORT POST ON TO PROVIDE A 3 FOOT OVERLAP, SECURELY FASTENED TOGETHER. THE TRENCH SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WITHIN 24 HOURS OF A 1/2" RAINFALL EVENT. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
5. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPED STORM FLOW OR DRAINAGE.
6. ALL TRENCHES SHALL BE PROTECTED BY A 3 FOOT OVERLAP, SECURELY FASTENED TOGETHER. THE TRENCH SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WITHIN 24 HOURS OF A 1/2" RAINFALL EVENT. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
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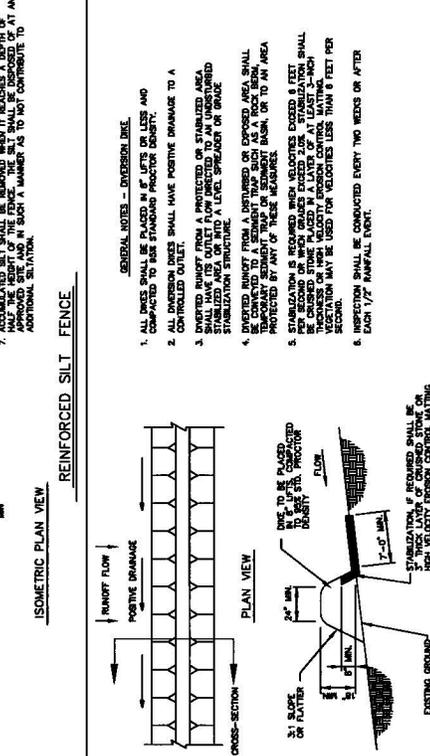
**GENERAL NOTES - DIVERSION DIKE**

1. ALL DIKES SHALL BE BUILT IN 4" WITH DENSITY AND COMPACTION TO BE STANDARD PROCTOR DENSITY AND TO BE PROTECTED BY A 3 FOOT OVERLAP, SECURELY FASTENED TOGETHER. THE DIKE SHALL BE A 3 FOOT OVERLAP, SECURELY FASTENED WITHIN 24 HOURS OF A 1/2" RAINFALL EVENT. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
2. ALL DIVERSION DIKES SHALL HAVE POSITIVE DRAINAGE TO A CONTROLLED OUTLET.
3. INVERTED RUNOFF FROM A PROTECTED OR STABILIZED AREA SHALL BE DIVERTED TO A CONTROLLED OUTLET. APPROVED METHODS.
4. STABILIZATION IS REQUIRED WHEN VELOCITIES EXCEED 6 FEET PER SECOND OR WHEN GRADES EXCEED 2.0% STABILIZATION SHALL BE PROVIDED TO PREVENT EROSION CONTROL MATS, VEGETATION OR HIGH VELOCITY EROSION CONTROL MATS. VEGETATION MAY BE USED FOR VELOCITIES LESS THAN 6 FEET PER SECOND.
5. INSPECTION SHALL BE CONDUCTED EVERY TWO WEEKS OR AFTER EACH 1/2" RAINFALL EVENT.



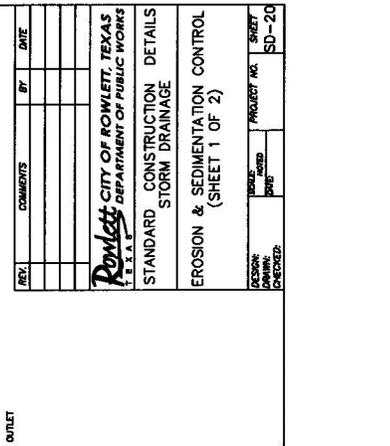
**GENERAL NOTES - ROCK BERM**

1. USE ONLY COMPACTIONED ROCK 4-8 INCHES IN DIAMETER FOR ROCK BERM. THE ROCK BERM SHALL BE SECURED WITH A ROVERS WIRE MESH WITH A 24 INCH WAVE AND A MINIMUM OF 10 MESH PER LINEAL FOOT. THE MESH SHALL BE PLACED ON THE LINE OF FLOW. WHERE FENCE CANNOT BE PLACED ON THE LINE OF FLOW, THE FENCE SHALL BE PLACED ON THE DOWNHILL SIDE TO PREVENT FLOW FROM SEPARATING FENCE.
2. THE ROCK BERM SHALL BE SECURED WITH A ROVERS WIRE MESH WITH A 24 INCH WAVE AND A MINIMUM OF 10 MESH PER LINEAL FOOT. THE MESH SHALL BE PLACED ON THE LINE OF FLOW. WHERE FENCE CANNOT BE PLACED ON THE LINE OF FLOW, THE FENCE SHALL BE PLACED ON THE DOWNHILL SIDE TO PREVENT FLOW FROM SEPARATING FENCE.
3. THE ROCK BERM SHALL BE INSPECTED EVERY TWO WEEKS OR AFTER EACH 1/2" RAINFALL EVENT. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
4. INSPECTION SHALL BE CONDUCTED EVERY TWO WEEKS OR AFTER EACH 1/2" RAINFALL EVENT.
5. WHEN THE SITE IS COMPLETELY STABILIZED, THE BERM AND MESH SHALL BE REMOVED AND DISPOSED OF IN AN APPROVED MANNER.
6. ROCK BERM SHOULD BE USED AS CHECK DAMS FOR CONCENTRATED FLOW AND ARE NOT INTENDED FOR USE IN FOREMOST PROTECTION.



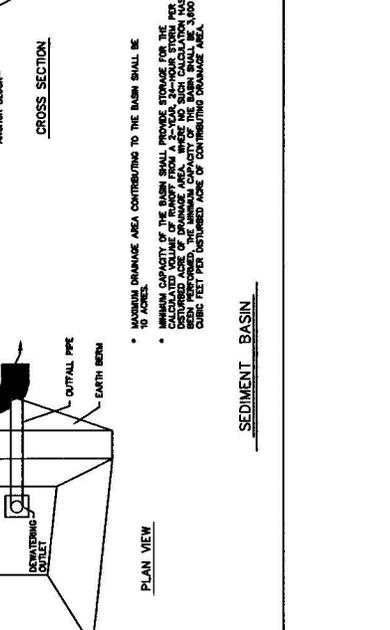
**GENERAL NOTES - SEDIMENT BASIN**

1. MAXIMUM DRAINAGE AREA CONTRIBUTING TO THE BASIN SHALL BE 10 ACRES.
2. MINIMUM CAPACITY OF THE BASIN SHALL PROVIDE STORAGE FOR THE RUNOFF FROM A 10 YEAR RAINFALL EVENT. THE MINIMUM CAPACITY OF THE BASIN SHALL BE 3,000 CUBIC FEET PER ACRE OF CONTRIBUTING DRAINAGE AREA.



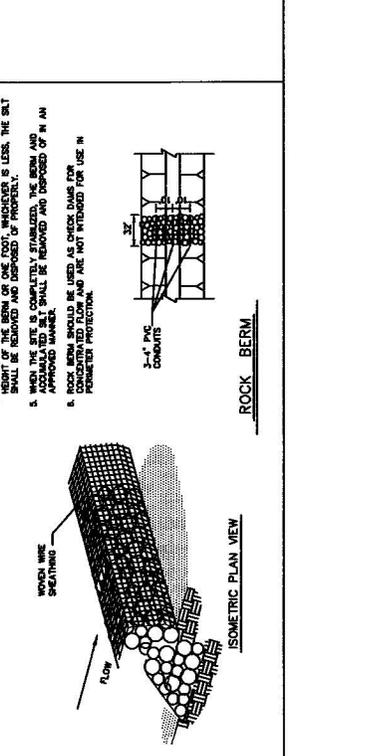
**GENERAL NOTES - STANDARD CONSTRUCTION DETAILS**

1. STANDARD CONSTRUCTION DETAILS
2. EROSION & SEDIMENTATION CONTROL (SHEET 1 OF 2)



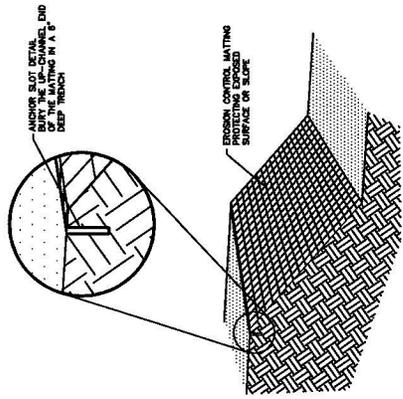
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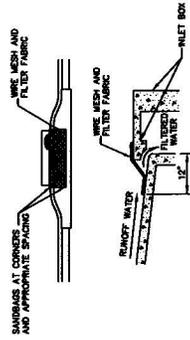


GENERAL NOTES - EROSION CONTROL MATTINGS

1. EROSION CONTROL SHALL COMPLY WITH THE LATEST EDITION OF THE NCTCOG.
2. STRIPS OF MATTING SHALL BE INSTALLED PARALLEL TO THE DIRECTION OF FLOW OVER THE SURFACE WHICH IS TO BE PROTECTED.
3. THE UP-CHEMEL END OF THE MATTING SHALL BE BURIED IN A TRENCH MEASURING 6 INCHES DEEP AND 6 INCHES WIDE FOR THE ENTIRE WIDTH OF THE END. THE SOIL SHALL BE BACKFILLED INTO THE TRENCH AND TAMPED FIRMLY. STAPLES SHALL BE PLACED EVERY 12 INCHES ALONG THE END OF THE MATTING.
4. EDGES OF ADJACENT STRIPS OF MATTING SHALL BE OVERLAPPED A MINIMUM OF 4 INCHES AND SHALL BE STAPLED EVERY 3 FEET ALONG THE OVERLAP.
5. WHEN JOINING STRIPS OF MATTING END TO END, A TRENCH SIMILAR TO THE ONE DUG AT THE BEGINNING OF THE ORIGINAL STRIP SHALL BE DUG WITH THE UP-CHEMEL END OF THE NEW STRIP BEING PLACED IN A LIKE MANNER IN THE TRENCH AS THE BEGINNING END OF THE ORIGINAL STRIP. THE END OF THE STRIP BEING FOLDED UNDER AT LEAST 12 INCHES. STAPLES SHALL BE INSTALLED AT 12 INCH INTERVALS ALONG THE WIDTH OF THE STRIP NOT MORE THAN 6 INCHES FROM THE TRENCH.
6. IN SITUATIONS WHERE ERODIBLE SOILS, STEEP SLOPES, OR HIGH VELOCITY FLOWS ARE ENCOUNTERED, A FOLD OF THE MATTING SHALL BE INSERTED INTO A 6 INCH TRENCH AND TAMPED FIRMLY. STAPLES SHALL BE INSTALLED AT 12 INCH INTERVALS ALONG THE TRENCH.
7. STAPLES FOR ANCHORING SOIL STABILIZING MATERIALS SHALL BE MADE OF 10 GAUGE WIRE OR HEAVIER. THEY SHALL BE 6 TO 10 INCHES IN LENGTH, WITH THE LONGER STAPLES BEING USED IN LOOSE OR UNSTABLE SOILS. THERE SHALL BE ONE STAPLE FOR EACH FOUR (4) SQUARE FEET OF MATTING TO ASSURE PROPER BONDING BETWEEN THE SOIL AND THE MAT MATERIAL.



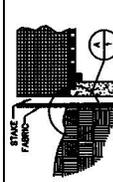
EROSION CONTROL MATTINGS



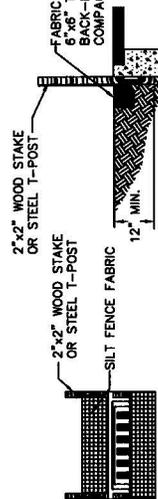
EROSION CONTROL BUFFER STRIP



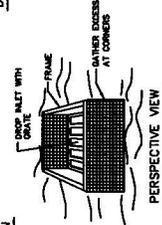
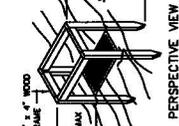
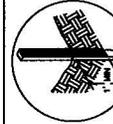
EROSION CONTROL BUFFER STRIP



STANDARD INSTALLATION



STANDARD INSTALLATION



ALTERNATE INSTALLATION

INLET PROTECTION FILTER BARRIER

**SPECIFIC APPLICATION:**  
THIS METHOD OF INLET PROTECTION IS APPLICABLE WHERE THE INLET DRAINS A RELATIVELY FLAT AREA (SLOPE NO GREATER THAN 5%) WHERE THE INLET SHEET PILING AND CURB ARE NOT TO EXCEED THE TYPICAL CONCENTRATED FLOWS, SUCH AS IN STREETS OR HIGHWAY MEDIANS.

REV.	COMMENTS	BY	DATE

**Rowlett**  
CITY OF ROWLETT, TEXAS  
DEPARTMENT OF PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS  
STORM DRAINAGE

EROSION & SEDIMENT CONTROL  
(SHEET 2 OF 2)

DESIGN	PROJECT NO.	SHEET
DRAWING		SD-21
CHECKED		

**Durilight - Internally Illuminated LED Street Name Sign Specifications**

The sign body shall be light weight for easy installation and made of aluminum. All hardware shall be stainless steel.

The standard sign assembly height is 22" with standard widths of:

- 72 inches (6 foot)
- Maximum length 96 inches (8 foot)

Letter Size: Initial Upper Case 10 inches, lower case 8 inches and 4 inch block numbers. Single sided signs.

Different sizes for special sign requirement are also available upon request. All signs shall be 3 maximum of thickness.

The maximum weight of the sign (without mounting hardware) should not exceed 70 lbs. for the 96-inch, 40 lbs. for 72 inches, and 15 lbs. for 48 inches signs.

Drain holes shall be positioned on the bottom of the sign to allow the draining of any water condensation in the enclosure.

The finish of the aluminum sign assembly shall be powder coated per request of the city.

A quality assurance program meeting MIL-STD-883 at the factory of the manufacturer is preferred.

The Sign face shall be made of strong polycarbonate material with UV and abrasion resistance.

Sheeting, including material and grades, shall be approved by end users before cutting. Letterings, including font and spelling, shall be reviewed and approved before making the signs.

The entire surface of the sign panel must be evenly illuminated with a minimum average brightness reading at the letters of 330 candelas per square meter cd/m<sup>2</sup> (31 candelas per square foot).

The manufacturer shall have a minimum six (6) years of experience in the manufacturing of traffic related products LED traffic control related products, and shall be ISO 9001:2000 International Quality System certified.

Maintenance: The sign shall be designed in a way that the replacement of sign face sheeting can be performed in the field without the need to remove the sign.

The sign shall be designed in a way that the replacement of LED modules can be performed in the field without the need to remove the sign in case any LED on the sign is burnt out.

The sides of the sign assembly facing traffic shall have removable faces mounted in an aluminum U-channel cover that is tightened at the bottom. The frame for these sides shall be of one-piece construction.

Letter Spacing and Width: All letter and spacing shall be in compliance with minimum recommendation. Letters/Legends requiring lengths in excess of the maximum size of the sign face shall be adjusted, condensing the letters/legend to fit the sign.

The sign assembly, including the sign panel and mounting assemblies shall be designed, tested, and constructed so that no permanent deformation, warping, or failure will occur when subjected to 110 mph wind loads.

The sign shall be equipped with solid-state high power white LED light strips utilizing state-of-the-art hi-flux LEDs with an efficient heat-dissipating feature.

LED light engine maximum power values shall not exceed 100 W for a 6-ft. sign that is illuminated on both sides and 135 W for an 8 ft. sign illuminated on both sides.

The LED light strip modules shall have a power supply regulating the voltage and current to preserve the life of the LEDs. The sign shall operate on 120 VAC (nominal). The sign shall be able to operate over the temperature range of -40°C to +74°C.

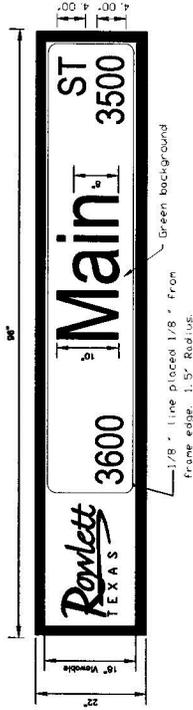
Life expectancy of the LED sign shall be a minimum of 100,000 hours with a 50% duty cycle.

A secondary reflecting device shall be installed at the top and bottom edges of the sign to help spread the light evenly over the sign face.

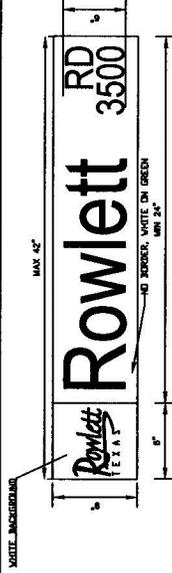
Mast arm mounting brackets shall be included with each sign.

A photo cell shall be provided, if requested, for each sign for on and off electrical switching control of the sign.

Manufacturer shall provide a minimum of three (3) years warranty on the LED sign.



**ILLUMINATED STREET SIGN**



- NOTES:
- CONTRACTOR SHALL PLACE SIGNS IN CONFORMANCE WITH THE CURRENT "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR SIGNS AND MARKINGS".
  - BLOCK NUMBERS (CARDINAL DIRECTION) SHALL BE INCLUDED ON SIGNS AND VERIFIED PRIOR TO SIGN FABRICATION.
  - CONTRACTOR SHALL SUBMIT THE SIGN DESIGN TO THE CITY OF ROWLETT FOR APPROVAL PRIOR TO SIGN FABRICATION.
  - ALPHABETS AND LATERAL SPACING BETWEEN LETTERS AND NUMERALS SHALL CONFORM WITH THE STATE OF TEXAS "STANDARD HIGHWAY SIGN DESIGNS, 2010", LATEST EDITION AND ANY APPROVED CHANGES THERE TO.
  - LATERAL SPACING OF TEXT SHALL BE AS TO PROVIDE A BALANCED APPEARANCE.
  - SIGN BACKGROUNDS SHALL BE OF FLAT SURFACE REFLECTIVE SHEETING (TYPE IX SHEETING) CONFORMING WITH THE CITY OF ROWLETT SPECIFICATIONS.
    - SIGN LEGENDS SHALL BE APPLIED USING E. C. FILM ONLY.
    - SHEETING AND EC FILM MUST BE FROM MATCHING SIGNING SYSTEM (GM).
  - SIGN BLANKS SHALL BE 9" AND MADE OF EXTRUDED ALUMINUM 0.125" THICK.
  - CITY OF ROWLETT LOGO STICKER (6" X 9") WILL BE PROVIDED TO THE CONTRACTOR BY THE CITY.
  - CONTRACTOR SHALL CONTACT WADE WILLIAMS WITH THE CITY OF ROWLETT (972-412-6168) TO OBTAIN LOGOS AND VERIFY THE PLACEMENT OF LOGO ON THE STREET NAME SIGN AT COST TO THE CONTRACTOR.
  - ALL FOUR-SIDED SIGNS SHALL HAVE 1.5-INCH RADIUS CORNERS. ALL SIGNS SHALL BE EC FILM OVER TYPE XI (DC3) SHEETING. ALL SIGN SIZES AND FONTS SHALL CONFORM TO CURRENT TEXAS MUTCD. ALL GROUND MOUNTED SIGNS SHALL BE GALVANIZED 1/2-GAUGE GROUND MOUNTED SIGN SYSTEMS. THE SYSTEM SHALL CONSIST OF THE FOLLOWING THREE ELEMENTS:
    - 12-FOOT LONG 2.88" INCH ROUND POLES WITH HOLES.
    - 38-INCH LONG ROUND BASE.

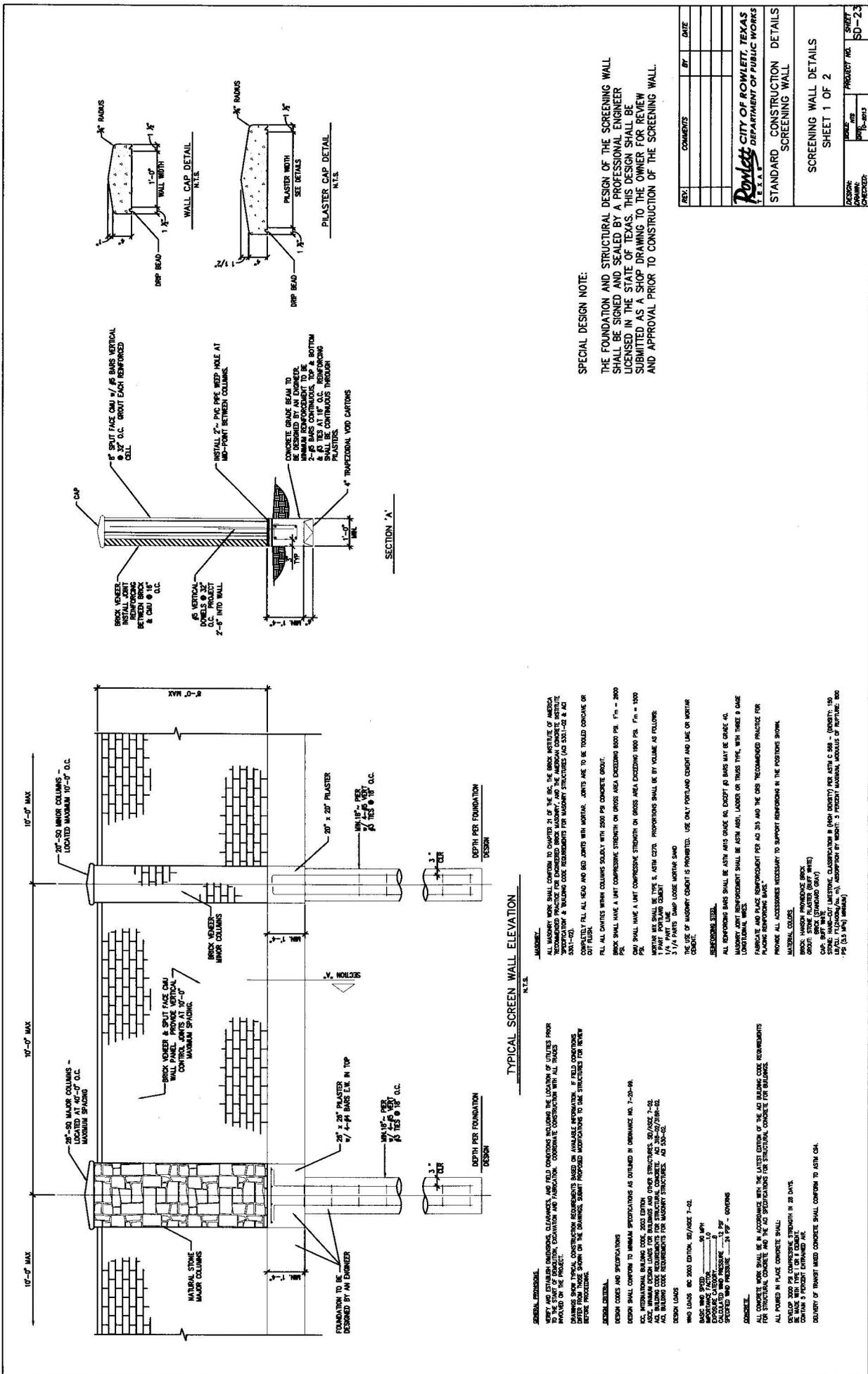
REV	COMMENTS	BY	DATE

DESIGNER:	PROJECT NO.:
DRAWN:	DATE:
CHECKED:	SHEET:
	SD-22

STANDARD	CONSTRUCTION	DETAILS
STREET SIGNS		



**TYPICAL SCREEN WALL ELEVATION**

**GENERAL NOTES:**  
 VERIFY AND ESTABLISH DIMENSIONS, CLEARANCES, AND FIELD CONDITIONS INCLUDING THE LOCATION OF UTILITIES PRIOR TO CONSTRUCTION. PROVIDE PROTECTION, EXCAVATION AND FABRICATION. COORDINATE CONSTRUCTION WITH ALL TRADES.  
 DRAWINGS SHOW TYPICAL CONSTRUCTION REQUIREMENTS BASED ON AVAILABLE INFORMATION. IF FIELD CONDITIONS DIFFER FROM THOSE SHOWN ON THE DRAWINGS, SUBMIT PROPOSED MODIFICATIONS TO THE STRUCTURES FOR REVIEW BEFORE PROCEEDING.  
**GENERAL NOTES:**  
 DESIGN CODES AND SPECIFICATIONS  
 DESIGN SHALL CONFORM TO MINIMUM SPECIFICATIONS AS DETERMINED IN ORDINANCE NO. 7-20-94.  
 ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE ACI BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE AND THE ACI SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BALANCED ALL Poured IN PLACE CONCRETE SHALL  
 DEVELOP 3000 PSI COMPRESSIVE STRENGTH IN 28 DAYS.  
 DELIVERY OF TRANSPORT MIXED CONCRETE SHALL CONFORM TO ASTM C-611.  
**REINFORCING STEEL:**  
 ALL REINFORCING BARS SHALL BE ASTM A615 GRADE, EXCEPT AS BARS MAY BE GRADE 41.  
 MASONRY JOINT REINFORCEMENT SHALL BE ASTM A615, LARGER OR THINNER TYPE, WITH THREE 9 GAUGE CONTINUING WIRES.  
 FABRICATE AND PLACE REINFORCEMENT PER ACI 318 AND THE CDS "RECOMMENDED PRACTICE FOR PLACING REINFORCED MASONRY."  
 PROVIDE ALL ACCESSORIES NECESSARY TO SUPPORT REINFORCING IN THE POSITIONS SHOWN.  
**MATERIAL COLORS:**  
 BRICK: MASONRY IMPROVED BRICK (UNFINISHED)  
 GROUT: BRICK (STANDARD GRAY)  
 STONE: NATURAL STONE (UNFINISHED, CLASSIFICATION B (HIGH DENSITY) PER ASTM C-566 - DENSITY: 150 LB/FT<sup>3</sup> (2400kg/m<sup>3</sup>), ABSORPTION BY WEIGHT: 5 PERCENT MAXIMUM, MODULUS OF RUPTURE: 800 PSI (55 N/mm<sup>2</sup> MINIMUM)  
**MASSURE:**  
 ALL MASONRY WORK SHALL CONFORM TO CHAPTER 21 OF THE IBC, THE BRICK INSTITUTE OF AMERICA "RECOMMENDED PRACTICE FOR ENHANCED BRICK MASONRY," AND THE AMERICAN CONCRETE INSTITUTE (ACI) 530.1-03. ALL BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530.1-03 & ACI 530.2-03).  
 COMPLETELY FILL ALL HEAD AND BED JOINTS WITH MORTAR. JOINTS ARE TO BE TOoled CONCAVE OR CUT FLUSH.  
 FILL ALL CAVITIES WITH COLLARS SOLIDLY WITH 2000 PSI CONCRETE GROUT.  
 BRICK SHALL HAVE A UNIT COMPRESSIVE STRENGTH ON GROSS AREA EXCEEDING 5000 PSI.  $f_m = 1500$  PSI.  
 CMU SHALL HAVE A UNIT COMPRESSIVE STRENGTH ON GROSS AREA EXCEEDING 1800 PSI.  $f_m = 1000$  PSI.  
 ALL WALLS SHALL BE TYPE S, WITH 1/4" PROPORTIONS SHALL BE BY VOLUME AS FOLLOWS:  
 1 PART PORTLAND CEMENT  
 1 1/2 PARTS SAND  
 3 1/4 PARTS SHAP LOOSE MORTAR SAND  
 CONCRETE  
 ALL CONCRETE SHALL BE PORTLAND CEMENT AND LIME OR MORTAR  
 CONCRETE

**SPECIAL DESIGN NOTE:**

THE FOUNDATION AND STRUCTURAL DESIGN OF THE SCREENING WALL SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF TEXAS. THIS DESIGN SHALL BE SUBMITTED AS A SHOP DRAWING TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION OF THE SCREENING WALL.

REV.	COMMENTS	BY	DATE

**City of Rowlett, Texas**  
 DEPARTMENT OF PUBLIC WORKS  
 STANDARD CONSTRUCTION DETAILS  
 SCREENING WALL  
 SHEET 1 OF 2

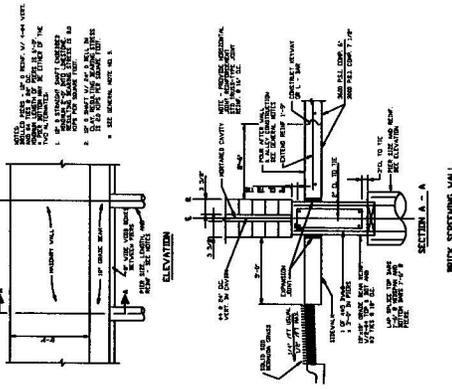
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 PROJECT NO.: [blank]  
 SHEET NO.: SD-23

**GENERAL NOTES**

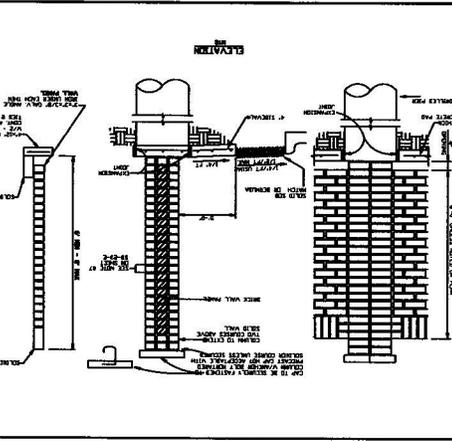
1. CONCRETE - MINIMUM STRENGTH, 4000 P.S.I. & 80 MPA.
2. REINFORCEMENT - ASTM A 616.
3. ALL REINFORCEMENT SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONCRETE CODE AND THE CONCRETE MANUAL.
4. VOID LANS - 80 P.S.F.
5. PER BEARING STRESSES - SEE BRICK SCREENING WALL NOTES.
6. REBAR - TYPE #3.
7. PROVIDE CONTROL JOISTS @ 20 FEET.
8. PROVIDE EXPANSION JOISTS @ 80 FEET IN CENTER HOOKS.
9. WHERE THERE IS NO ALLEY AVAILABILITY, PROVIDE HOOKS 9 FEET IN CLAY OR 8'-0" MINIMUM WITH 2'-0" MINIMUM INTO WEDS.
10. ALL EXPOSED CONCRETE SHALL HAVE A RUBBED FINISHED SURFACE.
11. ALL INTERIORS OF THE WALL SHALL BE PLASTERED TO FINISH.
12. MAXIMUM PLASTER SPACING 48 FEET.
13. WALLS ON THE LINE OF SPREAD LOADS OR AT CORNERS, SHALL NOT HAVE ELEVATIONS WHICH ARE GREATER THAN 3" ABOVE THE HIGHEST OUTER ELEVATION.
14. THE WALL SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONCRETE CODE AND THE CONCRETE MANUAL.

**GENERAL NOTES**

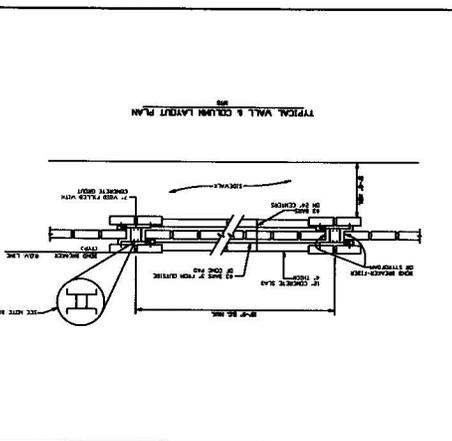
1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 P.S.I. AT 28 DAYS.
2. REINFORCING STEEL SHALL BE HEAVY BULLETED STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A-616-GR60A.
3. CONCRETE FOR BULLETED PILES SHALL BE PLACED WITHIN 8 HOURS OF POURING PILE FORMS.
4. BRICK MORTAR SHALL BE AS SPECIFIED IN ITEM 2.6.6 OF THE SPECIAL PROVISIONS.
5. MORTAR SHALL BE TYPE "N".
6. CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE REFERENCED PRACTICE FOR ENGINEERED BRICK MASONRY - 2 BRICK.
7. USE 80 GRADE 2"x4" V-GROOVE GALVANIZED LAMBER VISE TO EXPOSE HORIZONTAL IN WALL PANEL DOWNWALL CURVE FOR EVERY COURSE OF COLUMN BRICK.
8. 80 GRADE VISE FABRICATED AS SHOWN BETWEEN EACH COURSE OF COLUMN BRICK.
9. THE WALL SHALL BE ALIGNED WITH THE CENTERLINE OF THE COLUMN. THE COLUMN SHALL BE ALIGNED WITH THE CENTERLINE OF THE WALL. THE WALL SHALL BE CONSTRUCTED TO THE CENTERLINE OF THE COLUMN. THE WALL SHALL BE CONSTRUCTED TO THE CENTERLINE OF THE COLUMN. THE WALL SHALL BE CONSTRUCTED TO THE CENTERLINE OF THE COLUMN.
10. A WORK ORDER ASSOCIATION SHALL BE OBTAINED PRIOR TO START. PROVIDE MAINTENANCE FOR THE REFERENCED WALL.



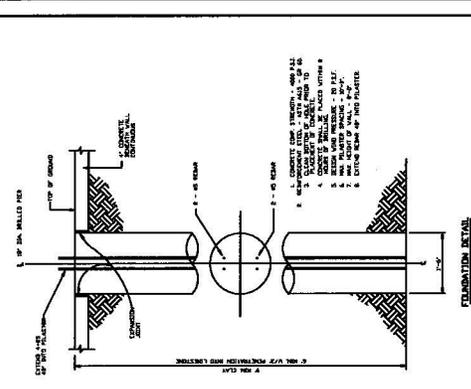
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION	TYPICAL CONSTRUCTION DETAILS BRICK SCREENING WALL REV. 01/10 SHEET 01-01-3
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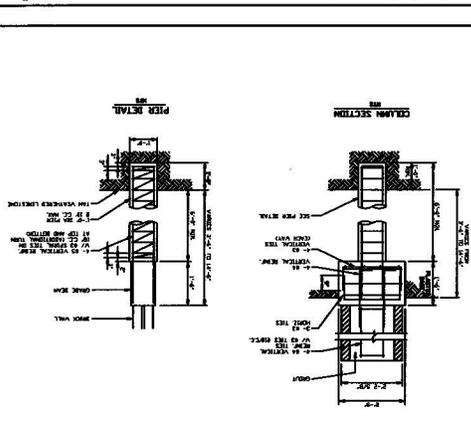
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION	TYPICAL CONSTRUCTION DETAILS BRICK SCREENING WALL REV. 01/10 SHEET 01-01-4
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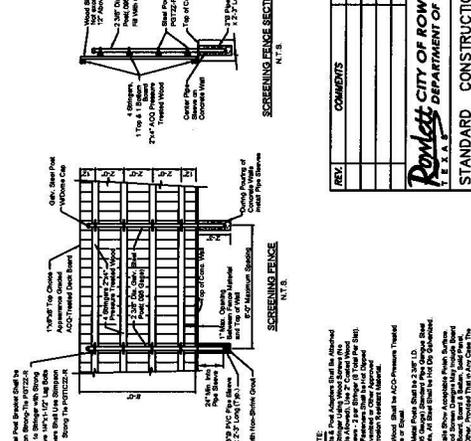
CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION	TYPICAL CONSTRUCTION DETAILS BRICK SCREENING WALL REV. 01/10 SHEET 01-01-5
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CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION	TYPICAL CONSTRUCTION DETAILS FOUNDATION DETAIL REV. 01/10 SHEET 01-01-7
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CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION	TYPICAL CONSTRUCTION DETAILS COLUMN SECTION PER RETAIL REV. 01/10 SHEET 01-01-8
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CITY OF HOUSTON DEPARTMENT OF PUBLIC WORKS ENGINEERING DIVISION	TYPICAL CONSTRUCTION DETAILS SCREENING FENCE SECTION REV. 01/10 SHEET 01-01-9
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**COMMENTS**

REV.	DATE	BY

**PROJECT NO.** SD-24

**REVISIONS**

NO.	DATE	DESCRIPTION

**CITY OF HOUSTON  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING DIVISION**

**STANDARD CONSTRUCTION DETAILS  
SCREENING WALL**

**SHEET 2 OF 2**

**CITY OF HOUSTON  
DEPARTMENT OF PUBLIC WORKS  
ENGINEERING DIVISION**

**NOTE**

1. BRICK PER APPROVED SHALL BE APPROVED BY THE CITY OF HOUSTON.
2. ALL BRICK SHALL BE 2"x4" V-GROOVE GALVANIZED LAMBER VISE TO EXPOSE HORIZONTAL IN WALL PANEL DOWNWALL CURVE FOR EVERY COURSE OF COLUMN BRICK.
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4. CONCRETE SHALL BE 4000 P.S.I. & 80 MPA.
5. REINFORCEMENT SHALL BE PLACED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONCRETE CODE AND THE CONCRETE MANUAL.
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